

THE NATION'S SCHOOLS

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Construction..... Reginald H. Smith

Summertime Universal Military Training
..... Arthur H. Moulton

Lessons by V-Mail..... M. J. Sprague

Will Your Plans Be Ready.....

Sick Leave Allowance.....

21 Original Articles and Reports

DECEMBER

943

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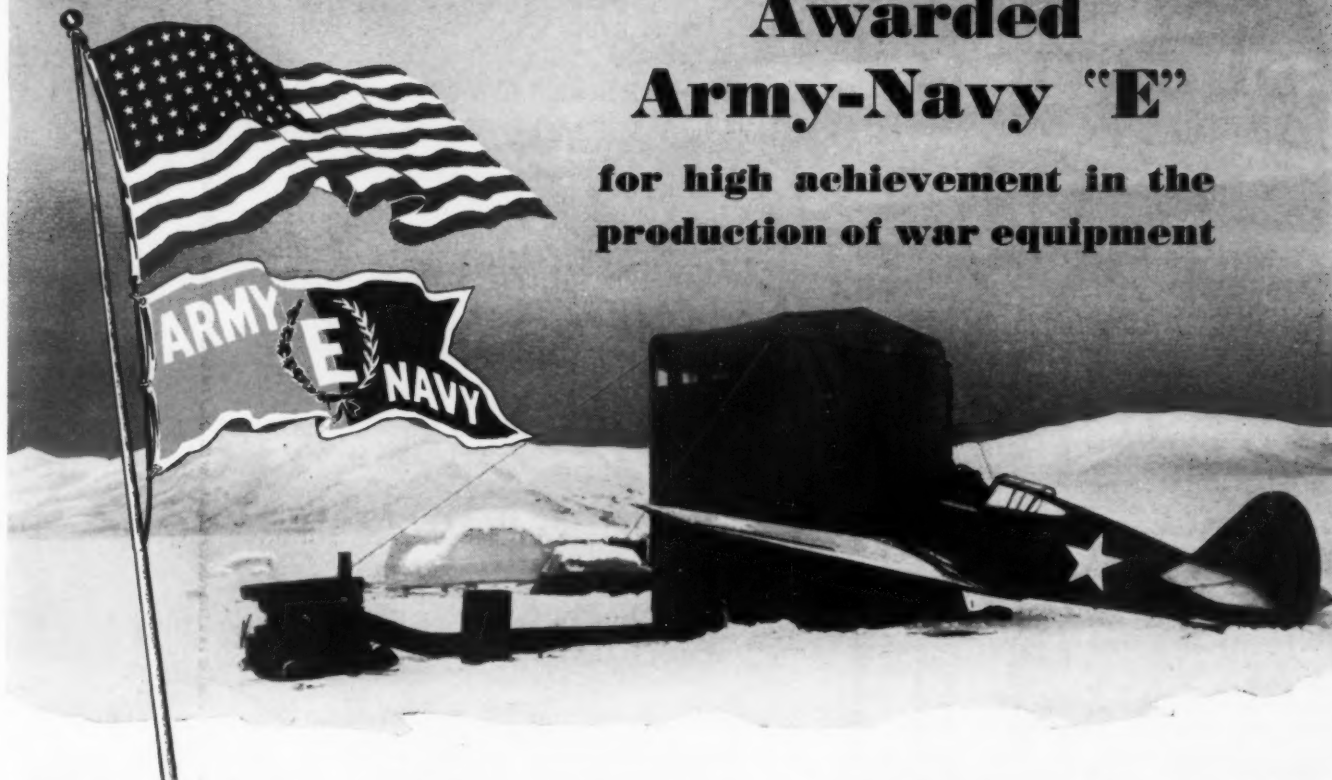
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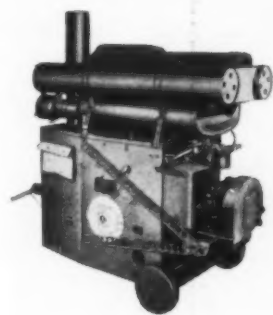
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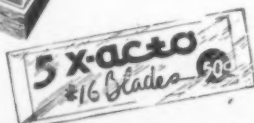
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IT PAYS TO STANDARDIZE on Colgate-Palmolive-Peet maintenance soaps, as many large schools have discovered. For one thing, we have the right soap for every type of cleaning job. In addition, there's the convenience of getting all your soaps from one dependable source.

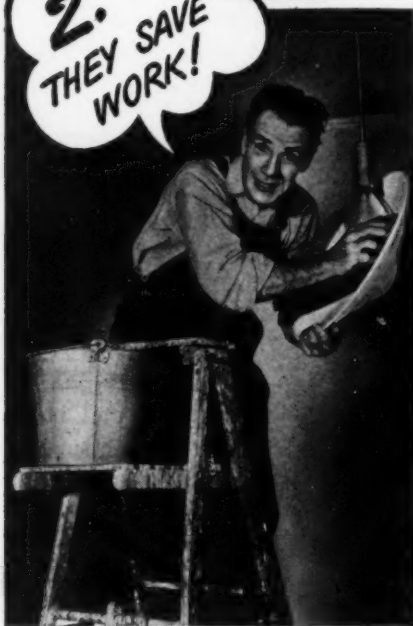
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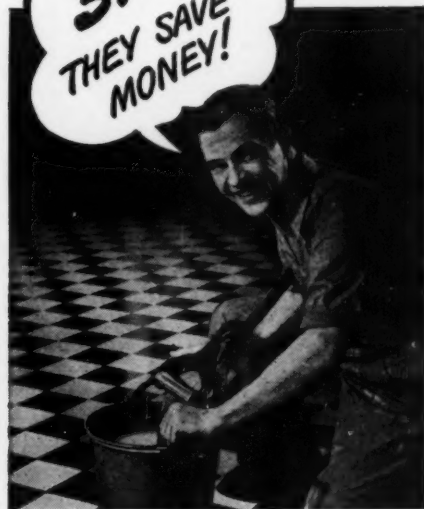
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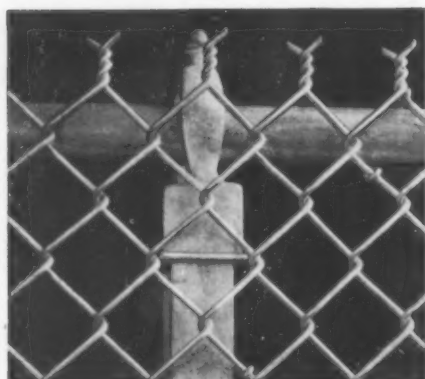


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THE WAR ARE USED IN MAKING SOAPS

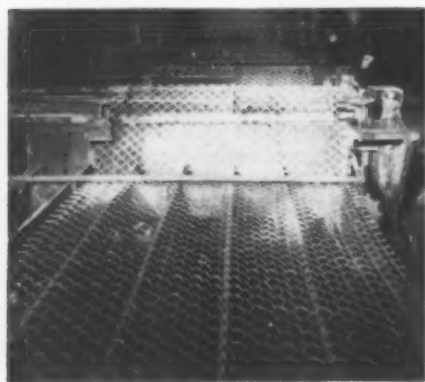
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HEADLINES



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War requirements now take the full production of Continental Chain Link fence. To help you plan fence installations for completion after the war, Continental offers you a free 48-page fence manual. Remember, only Continental fence is made of KONIK* steel and has 14 advanced features of construction.

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CONTINENTAL
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POSTWAR EDUCATION

Postwar education for discharged service personnel at government expense as recommended by the President has been given impetus by three new bills, S. 1509, S. 1506 and S. 1507, the first introduced by Senator Thomas, the last two by Senator Clark. (Story on page 64.)

A.A.S.A.

A fifth regional conference of the American Association of School Administrators is to be held at Kansas City, Mo., and a sixth is being planned for California. (Story on page 64.)

CHILD CARE

Child care centers and nurseries for children of mothers who hold war jobs are to receive more liberal assistance under the Lanham Act, so that fees paid by mothers can be kept under a ceiling of 50 cents a day. (Story on page 64.)

CHILDREN'S SHOES

A new supply of nonleather shoes for children up to 8 years will be available ration-free about January 1. Although they will have canvas uppers, they will not be ordinary gym shoes but will have soles suitable for general wear. Shoes larger than misses' and youths' size 3 will be rationed. (Story on page 66.)

CAFETERIA EQUIPMENT

More skillets and kettles for kitchens, more satisfactory knives, forks and spoons for school cafeterias will be available following recent revisions of two orders, one increasing the amount of cast iron available for certain pieces of kitchenware, the other allowing manufacturers to sell silver- or chromium-plated cutlery and alloy steel flatware to institutions. (Stories on pages 64 and 65.)

POSTWAR PLANNING

A clearinghouse for schoolmen's ideas on building materials, equipment and specialties is being established so that

manufacturers can be cognizant of professional desires and demands. (Story on page 35.)

SICK LEAVE

Sick leave allowances for both teachers and noncertificated school board employes are being liberalized, opinion poll shows. (Story on page 27.)

OFFICE MACHINERY

Persons with W.P.B. authorization to purchase restricted types of office machinery must buy the products from suppliers named in the authorization and can obtain only the brand of equipment specified, according to a recent interpretation of Order L-54-c. (Story on page 66.)

SALARY ADJUSTMENTS

A recent ruling of the National War Labor Board explains that nonprofit organizations that have been exempted from payment of income and social security taxes do not have to file applications for approval of wage and salary adjustments. (Story on page 64.)

MILITARY TRAINING

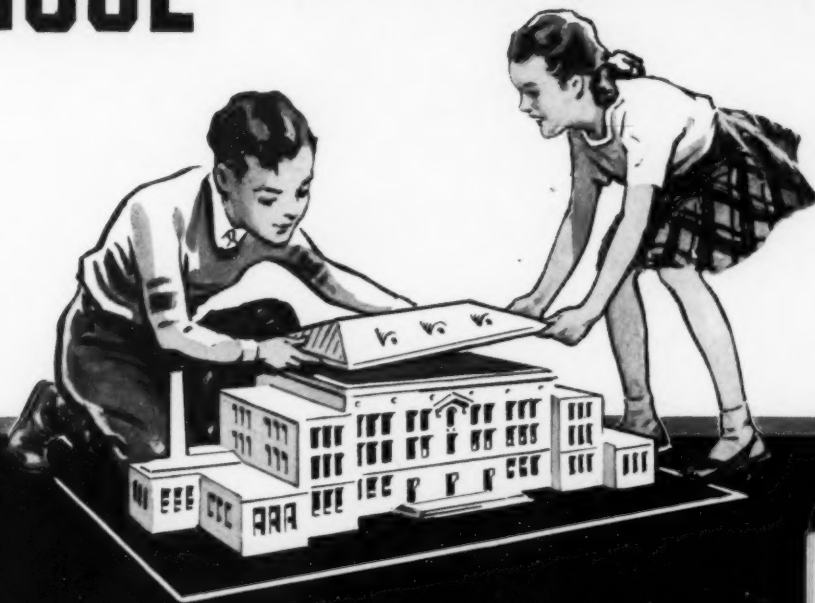
Looking ahead to Congressional enactment of compulsory military training after the war, the Editor suggests that a one year program might be broken in four three month training programs during summer vacation periods. (Story on page 15.)

CHRISTMAS VACATIONS

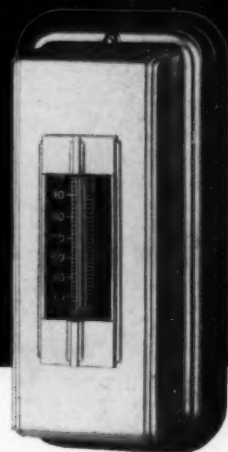
Schools in some cities will have longer Christmas vacations so that pupils may help out with the Christmas rush in post offices and stores. (Story on page 64.)

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Safeguard health for greater
mental efficiency —



To say, "Good health is important," is not enough! What counts is *doing* something about it — for what you do to promote good health in your school contributes to the well-being of the nation. That is why maintenance of proper room temperatures in every school is *doubly* important these days.

Make sure that the temperature control system in your

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★ Today—all Ampro projectors go into the war program. But after D-Day—AMPRO will use its added skill to aid the evolutionary changes in teaching methods ★ Write for Ampro Catalog of 8mm. and 16mm. silent and sound projectors.

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THE ROVING REPORTER

Pre-Service Course for Girls

To help solve the nation's No. 1 womanpower problem, McKinley High School, Canton, Ohio, last spring performed a significant service.

To meet military and civilian needs a goal of 65,000 new student nurses was set for 1943 and high schools, being the chief source of recruits, were given plenty of vocational material regarding qualifications and requirements for the profession.

McKinley High was not satisfied with pure guidance. It was conducting 13 pre-induction courses for boys and wanted to do something for graduating girls. Lloyd M. Swan of the chemistry department knew that many girls fail in nursing schools because they are weak in science. Therefore, a transition course in chemistry was planned for girls who expressed an interest in a nursing career.

This 12 week course was open to those girls who had completed one semester of high school chemistry. The emphasis on all topics was that of medicine and nursing. It was stiffer than the regular day school chemistry course, to prepare the girls for the accelerated pace of the present day school of nursing.

One result was a rise in day school chemistry grades on the part of the girls taking the pre-nursing course. Other values were preparatory and guidance.

Two of the 25 girls registering for the course decided nursing was not the career for them. Four who were undecided caught the spirit of nursing science and are now enrolled in a professional school. The others, some of whom are already in the uniform of the U. S. Cadet Nurse Corps, are finding their professional training easier because of McKinley's pre-nursing course.

Ration Book 4 at Salida

When it was learned that the schools at Salida, Colo., were about to be asked to issue Ration Book 4, L. A. Barrett, superintendent of schools, approached the pupils in the commercial department of the senior high school and asked them if they would care to volunteer to take over the task of issuing 5000 books.

About four dozen youngsters volunteered and did such a splendid job that Salidans are loud in their praise of the work done by the young people. Some acted as receptionists, some as guides, some aided the aged and infirm to fill out their blanks while the majority of the young people filled out books. So well was the system handled that not a single person had to wait in line.

Schools were held as usual in all the buildings in town with only D. F. Rouse, commercial teacher, and Dr. L. A. Bar-

rett, superintendent, acting as advisers. Salida school officials plan to use the commercial pupils again should there be another call for rationing work to be done by the schools.

Mr. Barrett found that the presence of good looking high school girls at the ration book tables led to a great increase in the number of men who came to apply for books for the family—after the first day.

Contact With Servicemen

Keeping in touch with the boys in the service is the job assumed by some organization in almost every high school. You may want to know how the student a capella choir at Bartlesville, Okla., handles its morale-building contacts with the servicemen who were former choir members.

Posted on the bulletin board in the choir room is a flag decorated poster labeled "Our Boys in the Service." Beneath the title are the addresses of the boys in the order in which they left the choir to join the various branches of the service. These addresses are kept up to the minute.

Beneath the poster is an envelope containing many postal cards. Each has been neatly addressed to a boy in camp or with an overseas detachment. As William L. Edwards explains, the addressed cards not only make certain that each boy gets mail from the choir, rather than just a few favorites, but also prevent pupils from using the cards for other purposes.

Two or three times a year the choir members take up a collection and buy small gifts to send to the servicemen. The boxes sent contain useful articles of the type that the men usually buy with their own money.

The whole project is pupil inspired and pupil administered, although the choir director does some gentle prodding now and then to keep the first enthusiasm from languishing.

Matching Bonds

Pupils of the schools at Keenesburg, Colo., have gone all out for war bonds, thanks to a little psychology applied by Supt. C. F. Shambaugh.

According to a teacher in the Keenesburg schools, Mr. Shambaugh's truck farm prospered this year and he decided to put the money into war bonds. When the bond drive came along, he made a deal with his high school pupils—he would match them bond for bond. The prospect of making the superintendent "shell out" was just the right incentive. Within a surprisingly short time \$2300 had been collected from the whole school system, including the faculty. The high school pupils' share was around \$1000 and Mr. Shambaugh gladly matched it.



NEIGHBORS: Boettcher School of Denver, serving the handicapped, is connected by tunnel with Children's Hospital across the street.



BUY MORE WAR BONDS

Tomorrow—the World

THE boys and girls who are in our schools today face the responsibility of conquering tomorrow's world...not with force but with the intelligence, understanding and good-will developed through our great American system of free education.

It's a heavy responsibility for these future citizens and for our American schools, too. But the schools are doing a splendid job in spite of wartime shortages of personnel and equipment...in spite of the many impacts of war which make school management and even teaching itself difficult.

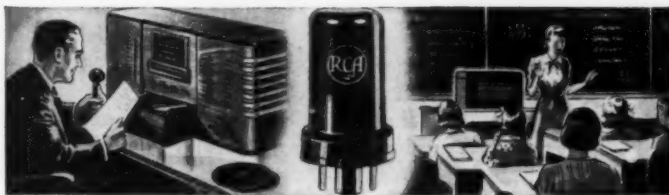
But today's increased problems have not kept progressive school administrators and teachers from planning tomorrow's post-war improvements. All over the nation they are planning new buildings, renovations, new equipment... and they are showing special interest in the improved teaching tools being developed by RCA which will be available when peacetime production is resumed.

TUNE IN "WHAT'S NEW?" RCA's great new show, Saturday nights, 7 to 8, E.W.T., Blue Network.

Good schools will need better equipment for best teaching results



VICTOR Records for Schools. Already well established as an extremely useful teaching tool, Victor records are growing more and more popular in classroom work. Thousands of records are available to help teachers in music, speech, drama, foreign languages, history, literature and many other subjects.



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RCA 16mm Sound Projection for Schools. Since all RCA production of 16mm sound projectors is being absorbed by the armed forces today, there are no new RCA projectors available. But thousands now in use continue to prove rugged endurance, ease of operation and fine projection of both image and sound.



RCA Victor Division—Educational Department

RADIO CORPORATION OF AMERICA

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The Educational Dept., RCA Victor Division
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Gentlemen: Please send me a copy of your new book "Planning Tomorrow's Schools." Thank you.

Name.....

School and Title.....

City..... State.....

Questions —AND ANSWERS

Minimum Salaries

Question: What should the minimum salary of teachers be for a California town of 10,000 population?—F.E.B., Calif.

ANSWER: The minimum salary established by California law for all public school teachers for full-time service is \$1520 per annum. Under present conditions of supply and demand and increases in costs of living, a minimum of \$2000 per annum is not too high for elementary school teachers in the schools of a community of 10,000 population.—WALTER F. DEXTER.

Data for Budget-Makers

Question: Is there any proportion of total expenditure or of per capita expenditure that could be used as a rough measure for the allocation of funds for the various budget items?—F.T., Tex.

ANSWER: The distribution of school expenditures for communities of like type provides a useful guide to budget-makers. Variations from these percentages have the merit of calling attention to areas in which less or more than normal emphasis is being given in the local budget and thus indicate those points at which particularly careful attention to the justification of expenditures is desirable. Current data of this sort can be obtained from the biennial reports of the U. S. Office of Education.—PAUL R. MORT.

War-Time Extracurricular Projects

Question: If schools have to be on "work-day" (minimum day) schedule part of the school year, how is time provided for extracurricular activities—assemblies, Girls' League, G.A.A., Lettermen's Club, sports, debate?—F.E.B., Calif.

ANSWER: Extracurricular activities are merely those worth-while developmental experiences that educators devise, provide and encourage in order that pupils may achieve the fullest and best-balanced maturity. These experiences are in addition to, and ancillary to, the basic curriculum. It should be emphasized, therefore, that extracurricular activities are not restricted to those enumerated in the inquiry or are they necessarily even similar to such enumeration.

Even before Pearl Harbor, the Los Angeles city schools had found great extracurricular values in work experience of many kinds. Since Pearl Harbor, cer-

tain activities, such as those involved in the Junior American Red Cross, the Elementary Service Clubs, "jeep" drives, the Victory Corps, victory gardening and a host of other experiences, have developed as significant and valuable extracurricular activities.

Opportunities for extracurricular activities are richer today than ever before. Most of them can be carried on successfully under the Four-Four Plan which operates in every senior high school in Los Angeles—four hours in school and four hours on a job at standard wages. Our entire educational system is always in a state of change, which is intensified by war-time conditions. There is no problem involved, however, in finding and using extracurricular activities today, provided we are interested in noting and making changes in the type and content of these experiences in keeping with war-time conditions.—VIERLING KERSEY.

Dissatisfied Teacher Not Good

Question: What should be the attitude of boards of education in granting releases during the present emergency?—C.D.M., Iowa.

ANSWER: Grant them. An unwilling and dissatisfied teacher is of no value, regardless of the strength of the contract.—A. B. M.

Patching Cement Sidewalks

Question: What sort of paving material or mastic works best for patching badly cracked cement sidewalks?—J.A.L., Me.

ANSWER: A tarvia product applied hot would be most satisfactory for patching cement sidewalks. It should have a high melting point so that it does not become sticky in summer. After heating, pour it into the cracks from some vessel with a spout. Nothing is very satisfactory for patching a badly cracked sidewalk.

The sidewalk mentioned above is probably made of a thin bed of cinders with an inch or so of cinder concrete with from $\frac{1}{4}$ to $\frac{3}{8}$ inch topping of cement and sand. As a practical matter, the best thing to do is break up such a walk after it has cracked badly and use it for ballast. Place 3 inches of cinders on top and then a 4 inch slab of cinder concrete with a 1 inch top dressing of cement and sand. If the slab is made of stone concrete instead of cinder concrete it will last indefinitely.

The total thickness can be reduced to 4 inches, including top dressing, but should not be thinner. Walks are sometimes made with small aggregate and troweled smooth, the top dressing being omitted. This will effect a small saving.—RALPH E. HACKER.

Caring for Toilet Fixtures

Question: What is the best and most economical way of caring for urinals and other washroom articles and fixtures?—F.T., Tex.

ANSWER: First of all, the plumbing must be in working condition; the urinals should flush regularly, and the spread of water should cover the entire inside area. Toilets should flush properly and wash bowls should drain easily and be free from faucet leaks. Floor drains, when present, should be kept open. Have water put through the drains every other day so as to keep the traps from drying out and sewer gas from passing through.

Clean wash bowls and toilet seats daily with a saturated solution of trisodium phosphate or some good commercial cleaner. Clean the wash bowls before cleaning the seats. Toilet bowls should be cleansed twice a week, with careful attention to the flange around the top.

Clean urinals with one of the solutions named twice weekly, being sure to reach between the side flanges and around the water inlet at the top.

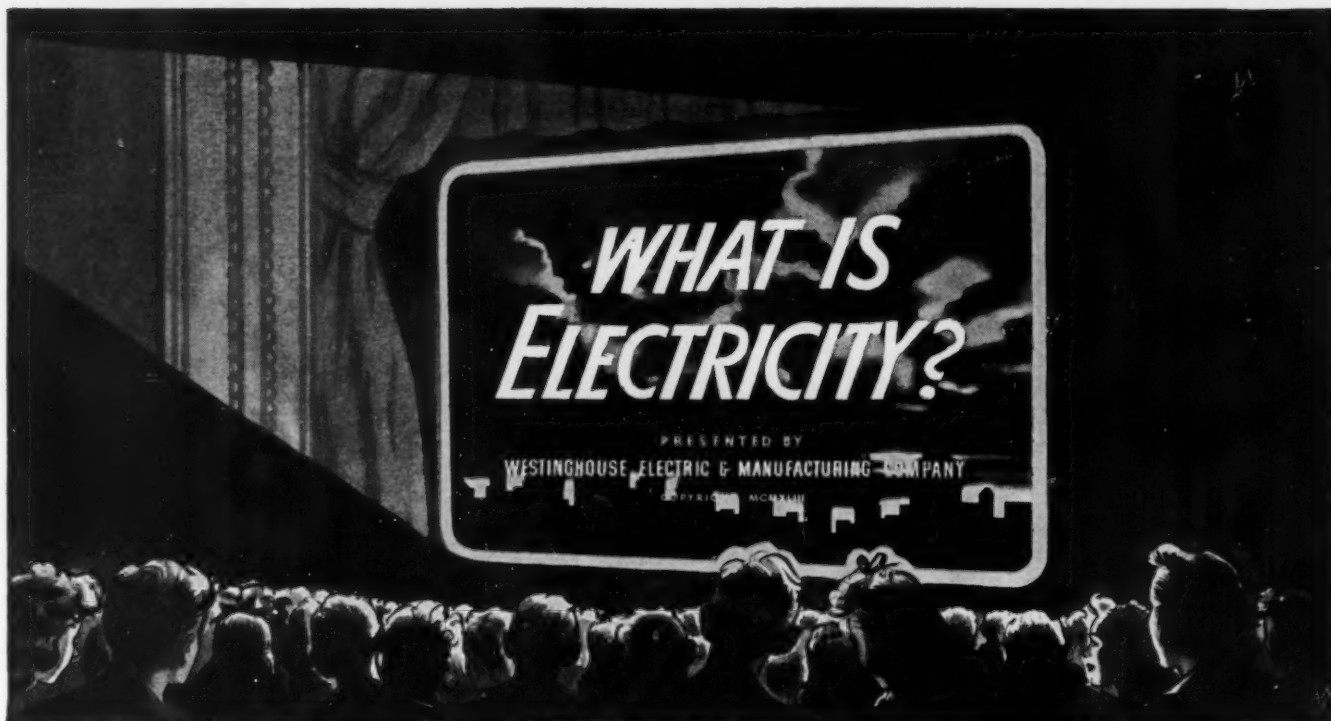
The condition of the toilet as a whole depends on the water lines that feed it. If it is fed by a sluggish rusty water line it will require more care than if fed by a line that is used more and contains less rust.—CARL F. RENNEKER.

Public-Parochial School Relationships

Question: What should be the relationship between the public school administrator and the parochial schools in any given city? In our case the parochial schools are on the elementary level only, the public high school serving all the youth of the city.—J.A.L., Me.

ANSWER: The public school was created by the state to provide educational service not otherwise adequately provided for. The public school constitutes the provision of a democratic state for equal educational opportunity. The state and its officials have a responsibility where the educational rights of children are jeopardized. The public school is bound morally and by legal implication to cooperate to the fullest extent with all worthy educational services. Provisions should be made for optimum adjustment of children whose schooling has not been uniform.

Where part of a pupil's education is provided for by private or parochial schools the right to partial participation in the public school program should not be denied. Such a pupil enters on the basis of individual civil rights and in no sense on the basis of institutional privilege.—LOWELL P. GOODRICH.



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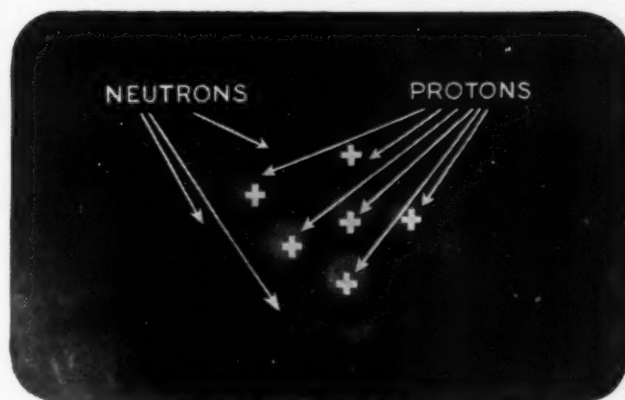
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LOOKING FORWARD

Equal Opportunity

THERE were approximately 1,750,000 individuals of secondary school age who were not registered in public or nonpublic schools in 1940. Approximately 400,000 high school graduates capable of benefiting from advanced education were not attending colleges or universities.

Secondary school nonattendance is due primarily to either inadequate or totally lacking secondary school facilities, because of an obsolete primary district system; indifference of local school districts; lack of individual means to continue education; racial discrimination; poor curricular adjustment on the part of schools to adolescent social and economic needs, and academically minded teachers. The primary reason for the failure of nearly half a million able youths to attend colleges and universities is lack of financial means.

Existence of these conditions belies the great American ideal of equality of educational opportunity in accord with inborn capacities. It also represents an enormous cultural loss in terms of undeveloped talents and possible individual contributions toward raising the general cultural level of society. Unless handicaps of economics, race, geography and physical condition can be eliminated through greater equalization of individual opportunity, public education may rapidly become an agency through which the American concept of an open classless society may be destroyed. The American dream of equality of opportunity means that each individual must be given a chance to overcome the accumulated environmental handicaps which, if long continued, may actually produce the antithesis of a democratic culture.

One of the vital postwar educational needs is provision for subventions that will allow some three million Americans to continue their education at least through the fourteenth year of secondary education and will allow nearly half a million gifted individuals to take advantage of professional training in our universities. Private charity in the form of a few scholarships is not sufficient. The responsibility lies primarily with the state but may well be shared by the federal government.

Federal Postwar Aid

THERE is little professional difference of opinion concerning the desirability of a continuation and expansion of federal aid to public education. Large differences arise with respect to the form federal aid should take and the type of instructional control likely to grow out of it.

Long experience with federally dominated and restricted vocational training, recent experience with P.W.A., W.P.A. and even more recently encountered difficulties with the Lanham Act indicate the dangers of federal bureaucratic power and control growing out of federal grants for current operation of any process. A sufficiently large number of laymen, state officials and educators became so thoroughly aroused over federal efforts looking toward the control of public education that the extremely dangerous S.637 educational bill suffered overwhelming defeat by a vote of 53 to 26 in the United States Senate during October. The vote was sufficiently large to ensure the defeat of any similar proposal in the near future.

Federal cash appropriation without federal control is just a dream. A theory recently advanced that Congress should merely appropriate large sums to the states to be expended in accordance with their own laws without federal restrictions or control brings loud laughter from practical-minded legislators.

There is a way, however, whereby federal aid can be given to public education with relatively little governmental control of either personnel or instruction. Procedural patterns have already been established.

If existing segments of the organized teaching profession will submerge their differences and unite in supporting the idea of federal postwar aid for (1) school buildings and (2) individual subventions to allow economically limited boys and girls to avail themselves of existing educational opportunities, substantial federal aid will be forthcoming. The practicability of school plant construction aid was strongly established by P.W.A. and W.P.A. during the depression. Further aid for school plants forms a logical part of a postwar sheaf of building projects. The National Youth Administration was originally created

to administer individual subventions or work-scholarships for youths in secondary and advanced schools. Similar appropriations might be satisfactorily distributed to the states by the U. S. Office of Education. Both projects are highly desirable from a long-term social point of view.

The net result within the states would be the same. Appropriations for buildings would mean that school construction could be placed on a pay-as-you-build basis, thus eliminating the heavy debt burden that has always helped to drag down individual districts during depression periods. Every dollar given by the federal or federal-state governments for school plant improvement or extension would mean practically two dollars for local or state appropriations because the cost of debt would be eliminated. Federal control would cease after a building was erected. The state could maintain control over its teachers and curriculum without federal interference. It's the logical move.

State Planning

A HEIGHTENING of state interest in the maintenance and improvement of public education as a state function was noticeable during the past legislative year. Educational survey commissions are now active in Alabama, Illinois, Ohio, New York and South Dakota as a result of legislative enactment and in Michigan through gubernatorial appointment. The Louisiana lay-professional commission completed its report in 1942.

In the past, state education commissions have too frequently been composed of members of the teaching profession with an occasional representative or two from parent organizations. All five of the currently operating commissions have as members representatives of the legislature and of major lay organizations as well as professional representatives.

Such varied representation is a recognition of the social nature of the instructional control of American public education. The fundamental responsibility of all five state commissions is either to study the total conditions and needs of public education or to concentrate on some organizational division, such as secondary education, or on some special instructional division, such as vocational education.

This decision on the part of at least six states to study their own educational problems in greater detail and to attempt sensible improvement at the state level through acceptance of legal responsibility for these problems is evidence of a healthy tendency as compared with what national professional pressure groups are attempting in fruitlessly seeking federal aid before the states have put their own educational houses in order.

State professional organizations have an unusual opportunity to make a vital contribution to the improvement of public education by stimulating statewide appraisals of current conditions and needs through

legislative-lay-professional commissions. Such commissions should be given the task of planning essential improvements in program, administrative organization, personnel, plant and finance for postwar conditions.

Broad-visioned professional leadership is needed for the solution of educational problems within each state.

Feeding the Children

REALIZATION that children must be well housed, well nourished and well cared for medically in their formative years, if they are to become healthy adults, is growing with dramatic swiftness throughout the country. The impetus has come from many sources.

During the depths of the depression, public schools and other social agencies met emergency child feeding needs from their own and community funds. Later, federal surplus commodities were distributed to those states and school districts desiring to take advantage of excess food supplies. Later still, Army officers blamed the public schools for the physical inadequacies of American youth as indicated by Selective Service induction examinations. These attacks caused health authorities, educators and parents to study the problem.

As a result of all these influences the school lunchroom is now considered a vital necessity in most states and presents one of the most urgent school plant extension needs outside of the large cities, which are already equipped in this respect. The satisfaction of this need is being currently retarded only by the inability of school districts to obtain priority ratings on plumbing, kitchen and lunchroom equipment. When the war with Germany is over, it may be possible to obtain the essential materials before the final termination of the conflict with Japan.

The school lunchroom promises to become an even more significant addition to postwar elementary and secondary school buildings than were gymnasiums and playfields after World War I. It is also reasonable to expect that nourishing noonday meals can be offered to all children as a community service.

Salaries Must Rise

ONE dominant fact has emerged out of the emotional national discussion of changes in cost of living. The purchasing power of a balanced budget dollar has decreased approximately 22 per cent since June 1940. Teachers' salaries throughout the country have increased approximately 10 per cent except in submarginal areas and districts. School budgets should be increased at least 10 per cent for 1944-45 if teachers are to maintain their 1940 economic status. Planning for increased budgets never enjoyed a more favorable advantage. The states and communities have the money. This is the time to plan next year's budget.

The Editor

Summertime Universal MILITARY TRAINING

ARTHUR B. MOEHLMAN

PACIFISM offers no safe solution for the prevention of war. Application of scientific invention to the science of war has so increased the tempo of conflict that any unprepared nation will have no chance against a prepared and aggressive neighbor in any future war. The United States cannot afford to be vulnerable with respect either to isolation from world problems or from lack of preparedness.

The American people can be safe only as they are willing to pay the insurance premium for continued peace—complete preparedness. The placement and extent of universal military training of American youth after the close of the second world war may affect both secondary and advanced education.

No right-minded individual approves of war and no socially intelligent individual desires war. There are, however, in this rapidly narrowing world individuals, groups and nations so atavistic in their social outlook that to them war is the only means of cultural advancement. There is little realism in assuming that the Junker and Samurai militarists will reform and lead a new life as a result of crushing defeat in the current conflict. If their history is interpreted aright, the postwar period simply means a breathing space favorable to the creation of political dissensions among their opponents and time for new preparations.

Nations Must Overcome Distrust

In addition, the peace of one war usually bears the seeds of the next war. If America, Britain, China and Russia cannot overcome their mutual suspicions and distrusts and band together in a general alliance to which other democratic nations may be progressively admitted, World War III may be considered a certainty twenty to thirty years hence.

While it may be difficult to demonstrate conclusively that complete

preparation for war actually prevents war, it would be just as difficult to prove that unpreparedness has advanced the cause of universal peace. Extreme pacifism is an invitation to the rough and tough boys to take a chance. Since Americans are a peace-loving people without desire for territorial expansion or imperialistic controls over politically and economically less mature people, it is not easy, even after the lessons of the current war, to obtain universal acceptance of the need for preparedness.

Several plans have been proposed for postwar universal military training, ranging from two years of compulsory service to one year of military-vocational training. The Tydings and Wadsworth bills now before Congress favor one year of training. President Roosevelt has expressed himself as generally favoring at least a year of training, coupled with special educational programs. Other suggestions include the integration of universal military training with secondary and advanced education.

Growth of Militarism a Danger

Admitting the need for universal defense training, there is also need to recognize its dangers. The United States cannot afford the militaristic indoctrination of youth. The American professional military mind has long been favorably impressed by the Prussian military tradition and particularly by Landwehr training methods. One of the most difficult problems confronting the American nation is to provide satisfactorily for national defense and still prevent the growth of militarism.

The American people will not grant more than one year of universal training for national defense. With the necessary extension of the secondary school program through the fourteenth year, as a result of technological changes in industry and commerce, it is even doubtful

whether the nation can afford an additional year of training beyond secondary school.

The interlocking of general and military education within the secondary program is even more questionable. The probable result would be increasing autocracy and undesirable regimentation within the school. It is so much easier to order than to lead. Yet the development of individual competency in democratic ideals and processes is one of the most important tasks of the postwar secondary school.

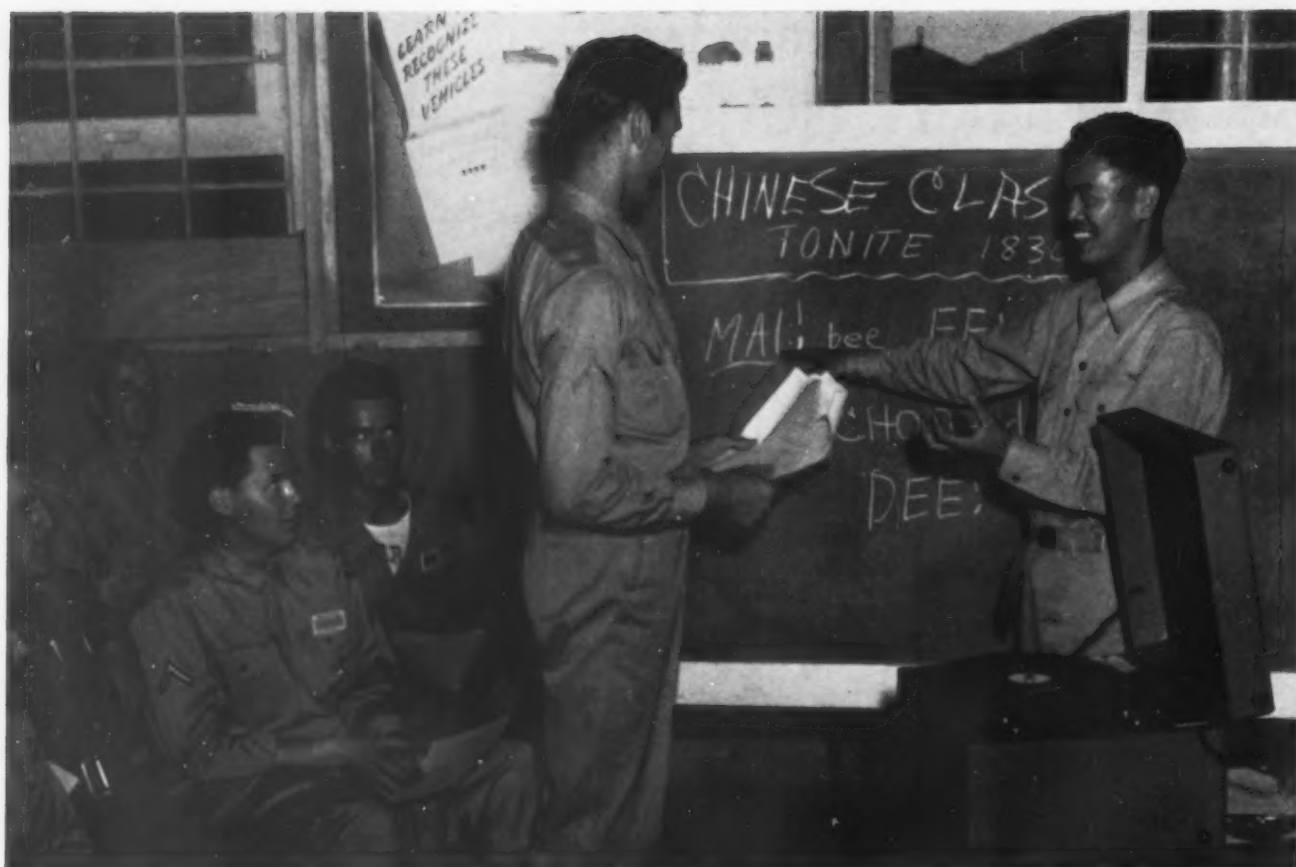
It might be possible to avoid some of these serious difficulties by placing universal military and naval training in the summer vacation periods beginning with the eleventh year of secondary school and extending through grade 14. The upper secondary instructional program could be contracted to nine months, allowing four full three month training programs during June, July and August.

Self-Discipline Is Best

This plan would provide intensive training in short periods broken by further academic and practical education during the school year. It might also prevent professional military ideas from permeating the general educational program. It might even force the military mind to a realization that the best discipline, even in the armed services, is self-discipline growing out of intelligent understanding and acceptance of need.

The junior R.O.T.C. might be safely abandoned except in the private military secondary schools. The senior R.O.T.C. and N.R.O.T.C. should be retained on a voluntary basis in colleges and universities. Following a full year of actual field training, the efficiency of these reserve officer schools might be greatly enhanced.

Universal defense training for all youths is a postwar necessity. The problem is to provide a plan that will enable America to be prepared adequately while safeguarding our democratic values and maintaining the complete subordination of the professional military to civilian control. The problem is both delicate and complicated, demanding sympathetic understanding and wholesome co-operation by both the teaching profession and the armed forces.



"Quickie" courses given in this country are available in 30 languages. A course in Chinese requires 6 to 12 hours' study with a language guide, phonograph records and a native teacher. The soldier learns to understand and speak 150 words and phrases.

LESSONS *by* V-MAIL

ANY person in service in this country or in the far corners of the earth who wishes to continue his education either through independent study or in classes during off-duty hours can do so, thanks to the special service division of the War Department's Army Service Forces.

The United States Armed Forces Institute, formerly known as the Army Institute, is the means of delivering this voluntary off-duty education to the nation's military and naval personnel wherever it may be. The institute is supervised by the education branch of the special service division, headed by Col. Francis T. Spaulding, on leave from his position as dean of the graduate school of education, Harvard University.

The institute was founded three weeks after Pearl Harbor to help

Uncle Sam enables his soldiers to go to school in far corners of the earth

MAJOR SPENCER D. BENBOW

Education Branch, Special Service Division
Army Service Forces, War Department
On leave from the public schools of Oakland, Calif.

make better fighting men out of civilians and to help men in uniform prepare for a return to peace-time pursuits.

The official Army regulation gives the institute's objectives as follows: (1) to provide continuing educational opportunities to meet the requirements of the command, particularly to furnish assistance to service men lacking educational prerequisites for assignment to duty that they are otherwise qualified to per-

form and to assist individuals in meeting requirements for promotion; (2) to enable those whose education is interrupted by military service to maintain relations with educational institutions and thus increase the probability of completing their education upon return to civil life, and (3) to enhance the value of Army personnel as citizens upon return to civil life.

With headquarters at Madison, Wis., and branches being established

all over the world, the institute provides the following services:

1. Three hundred institute correspondence courses in high school, technical school and college subjects with lesson service provided by the University of Wisconsin for institute headquarters and by foreign universities for institute branches.

2. Five hundred colleges and university correspondence courses offered by 82 educational institutions under contract with the government.

3. Textbooks in standard school subjects for use in voluntary off-duty classes and for independent study without the aid of a teacher (service editions of civilian texts, edited for self-study or self-teaching).

4. Tests and examinations covering standard school and college subjects.

5. Tests covering general educational development designed to assess educational maturity to be given to hundreds of thousands of men prior to demobilization and expected to be of considerable value to educational institutions in placing service men when they apply for readmission.

6. Specially prepared instructional materials in foreign languages in the form of phonograph records and a

printed text, the first level, or "quickie," courses teaching 150 common words and phrases in 30 foreign tongues; the second level offering advanced materials teaching 800 phrases.

7. An educational film service providing visual teaching aids.

8. An accreditation service for service men wishing to present an official report of education-in-service to school or college for credit evaluation after demobilization.

The accreditation service of the institute will assemble and submit to educational institutions upon request: a record of the service school attended, a report of correspondence courses taken, a report of examinations given and a record of service jobs satisfactorily performed. These reports are to be evaluated by colleges and universities in accordance with a plan proposed by the American Council on Education, and by secondary schools in accordance with a plan proposed by the National Association of Secondary School Principals.

The first catalog describing institute educational opportunities was distributed to Army personnel and to civilian schools and colleges in De-



The Army librarian helps a soldier select correspondence courses from the institute catalog. For a nominal fee he can study high school, technical and college courses. His lesson service is given by university teachers. Enrollments pour in by the thousands, more than half from overseas. Textbooks are being shipped everywhere. One benefit is improved morale through worthwhile use of off-duty time spent in study.





At the mail desk at institute headquarters many thousands of pieces of mail, coming in from all parts of the world, are sorted and processed daily, V-mail, photo-mail and regular mail. Women and limited service men do this noncombatant work. Review Arithmetic is a popular course.

ember 1942. A revised catalog is scheduled for early publication.

At the last count 60 per cent of institute enrollees were overseas, studying in classes, using institute self-study texts and records, sending in their correspondence lessons by photo-mail, taking examinations and applying for school and college credit. These overseas students have A.P.O. addresses leading to the tropics, the desert areas, the arctic regions, ships and shore stations. Ages of institute students range from 18 to 55 with 42 per cent in the from 20 to 24 year group and 36 per cent in the from 25 to 29 group.

Privates are enrolled in the greatest numbers. Corporals, privates first class, sergeants, staff sergeants, technical sergeants and master sergeants follow in the order given. Sixty-five per cent have completed high school and 23 per cent have had college training. Mathematics and business subjects are the most popular; mechanical, technical and electrical subjects also have attracted large numbers of students.

In making this educational program available to men in the field the special service division works with special service officers and Army librarians on duty with Army units. The special service division has trained a group of experienced edu-

cational administrators and supervisors as specialists for duty in Service Command and overseas headquarters. Trained in the Army style of education, these officers serve as educational advisers to commanding officers and special service officers, helping with technical professional problems and assisting in organizing off-duty educational programs.

The Navy Department participates in all activities of the institute and has a far-flung field organization of educational service officers on duty in all the principal shore stations and bases throughout the world. This article makes no attempt to cover their varied off-duty educational activities except as they parallel Army activities.

At the time of demobilization of the armed forces the special service division, through its education branch, will have ready an organization and a program that can be expanded overnight. The period between cessation of hostilities and actual discharge, including the time it takes to return men to the United States, will provide opportunity for everyone in the service to prepare in part for a return to civil life.

Much of the time not required for military duties can be spent in study. The establishment of overseas study centers at civilian institutions and



U. S. Armed Forces Institute headquarters are at Madison, Wis. It makes educational opportunities available to men and women of the Army, Navy, Marine Corps and Coast Guard in this country and in the farthest corners of the earth. Soldiers may enroll at institute headquarters or with one of the institute branches now overseas.

in military camps is planned. Institute texts will be used. Qualified officers and enlisted men released from combat duties will be used as instructors. Institute examinations, especially tests covering general educational development, and arrangements made with civilian schools and colleges will provide a means for accreditation of men for their Army school experience.

Why Federal Aid Legislation Fails

SELMA M. BORCHARDT

Washington Representative, American Federation of Teachers

NO BILL now before Congress providing general federal aid for education will become a law. This is a fact in spite of the other fact that there is urgent need for immediate aid if our schools are to be maintained at this time.

Teachers of America have been reading reports and expounding theories on the need of federal aid for education and on the absolute justice inherent in their appeals for such aid. It is time we stopped simply talking about the needs of our schools and accepted the fact that many states cannot raise the funds to finance education in the state. It is time we started directing our attention to a critical evaluation of the proposed means and methods through which the program of federal aid is to be financed and administered.

We must stop believing that the legislation is around the corner simply because someone says so and start asking ourselves, in all seriousness, why the legislation has not been enacted when the need for it is so glaringly apparent.

Why No Progress?

The record shows that for the last twenty-five years the American Federation of Teachers and the other teacher organizations have pleaded for federal aid for education. Yet actually we are no closer today to the enactment of legislation that would provide such aid than we were twenty-five years ago. We should frankly face the facts as to why this program has made no progress.

In 1918, when the first proposal for such legislation was made, the record shows that the A.F. of L., the A.F. of T., the N.E.A. and the General Federation of Women's Clubs were asking for a law that would create a federal Department of Education and would provide federal funds for aiding schools on a state-matching basis.

Twenty-five year record shows a vacillating attitude on the part of the federal aidists toward provisions embodied in various bills

The reason then given for the need of legislation was that World War I had shown that a large number of illiterates in this country needed education and that many of our foreign-born needed to be Americanized. This was the basis of the appeal in 1918. In the bill specific allocations were made for elementary and secondary education to assist in the war against illiteracy and for other specific causes.

No Consistent Policy

Gradually, year by year, as the hearings show, supporters of the principle of federal aid have changed their reasons for wanting the legislation on practically every point involved. First, the supporters of this legislation made the request for a Department of Education; then they dropped it. Next, they dropped their original request for state fund-matching programs and then they condemned this formula. They dropped, picked up and dropped again provisions for specific allocation of funds for specific levels and kinds of education. They urged the allocation of funds on a basis of school population, on a basis of total population, on a basis of need, on a basis of a weighted formula combining the other methods and then they dropped this formula.

The proponents of federal aid first ignored the need of protecting the Negro's right to share in the benefits of a federal program; then they opposed the right on a basis of states' rights; then they supported it half way; then opposed it; then supported it. They have supported bills including the present setup for vocational education, and they have deleted it. They have included, ex-

cluded and included provisions for school building programs.

At first, the federal aidists ignored the question of aid to Catholic schools. Then they opposed this principle. Then they tacitly accepted it. Then they opposed it again. It is to be observed that this principle was most ardently opposed while many of these same opponents were endorsing W.P.A. educational programs which aided private groups and while they were urging support for N.Y.A. which made direct grants to Catholic schools.

In a dozen more ways it can be shown by the printed record in the hearings on bills before Congress that the teachers of America have been led to endorse first one thing, then another, often in rapid contradiction; that lay groups that accepted the word of educators have likewise followed a policy of endorsing "the bill that gives help to the schools" without first making a critical evaluation of any bill in relation to any similar bills or by evaluating any bill on its own merits.

Need of Program Based on Study

The majority of the supporters of the principle of federal aid have adhered to a policy that has been vacillating in principle, opportunistic in tactics and fatal in practice. As a result, the program has actually not advanced one bit while the teachers have been told that the legislation is on the way—for the last twenty-five years.

While certain teacher groups have perhaps been a little more inconsistent than others, not one group in this country has consistently adhered to a well-planned program based upon a study of the problem.

Prelude to Postwar Planning

THE first concern of educational research is the population to be educated—its number, distribution and character.

If education is to keep abreast of the changes caused by the war and is to plan wisely for the postwar period, research is needed: (1) to re-examine the estimates of future population trends; (2) to determine the probable future distribution of the school population; (3) to provide more accurate data on the number and distribution of different school population groups; (4) to collect and present systematically more complete data on the characteristics of the varying groups to be educated, and (5) to develop formulas or technics for predicting the probable future growth and distribution of population in any particular community, region, state or subdivision thereof.

Predicting Population Trends

During the past decade several predictive studies of future population in the United States¹ were made. Assuming the long-range accuracy of these predictions,² it does not follow that such estimates will be sufficient for wise educational planning today.

War and economic cycles affect the birth rate curve. It is not a smooth curve. Following the first World War, the birth rate went up to 24.2 per thousand in 1921. In the depression it reached the all time low of 16.6 in 1933. In 1937 it started climbing again, reaching 17.9 in 1940 and an estimated 21+ in 1941.³

School authorities must plan for the later education of each successive year's crop of babies. Otherwise the schools will again be as unprepared for increasing school enrollments as they were in the late twenties.

¹Edwards, Newton: *Equal Educational Opportunity for Youth—A National Responsibility*. Washington, D. C.: American Council on Education, 1939.

²Chase, Stuart: *What the New Census Means*, Public Affairs Pamphlet, No. 56. New York City: Public Affairs Committee, Inc., 1941.

³Blase, David T.: *Advance Statistics of State School Systems, 1939-40*, Circular Letter, May 1942. Washington, D. C.: U. S. Office of Education.

Study of population trends will help administrators foresee and plan wisely to meet changes brought about by the war

J. CAYCE MORRISON

Assistant Commissioner for Research
The State Education Department
Albany, N. Y.

Analysis of federal census data discloses trends, a knowledge of which is essential to sound educational planning, such as migrations to and from cities⁴ and the growth of metropolitan areas by component parts.⁵ However, for effective educational planning, the federal census is insufficient. Each state needs its own annual school census of all persons from the age of infancy to 21, the reports of which should be available to state and local school authorities.

Research may also profitably speculate, *i.e.* consider certain hypothetical questions, such as: May the new rôle which the United States seems destined to play in the world cause some modification of present restrictions on immigration? If the United States succeeds in maintaining an annual income of more than \$100,000,000,000, as predicted by the National Resources Planning Board, will that higher economic level tend to encourage the maintaining of a higher birth rate? Will the growing emphasis on education for parenthood tend to restore a healthier attitude on the part of youth toward the bearing and rearing of children? Possibly

the ideals of birth control and of maintaining a normal birth rate will merge.

Population Being Distributed

The war is causing large and often violent shifts of population.⁶ New communities have been born overnight. Research should report the shifting distribution of school population by states and subdivisions thereof but, more important, should construct a basis for predicting the redistribution of population that will accompany the demobilization of war industries. It should ask: Which of the new communities created by war industries will become permanent? Which of those industries converted to war production will be reconverted to their former purposes?

At present approximately 4 per cent of the farm homes in the United States have electricity. What will be the probable extension and effect of electrification on the school population of rural areas? What will be the probable extension and effect of air transportation—passenger and freight—on the distribution and segregation of the school population? Will industry in the postwar period tend to centralization or decentralization?

Other factors that will affect the

⁴Population Changes and Their Significance in New York and Its Environs, Regional Plan Bulletin No. 55. New York: Regional Plan Association, July 14, 1941.

⁵Burke, Arvid J.: *Metropolitan Areas and Future School Problems*, Public Education Research Bulletin. Albany, N. Y.: New York State Teachers Association, Vol. 6, No. 3.

⁶Boom Towns of the War: Shortages of Labor, Housing (Based on report of the Tolan Committee). Washington, D. C.: United States News, May 22, 1942.

redistribution of school population in the postwar period are the influence of the automobile, good modern school facilities in rural areas, low-cost housing projects and the rebuilding of cities with the interests of children in mind.

More adequate knowledge is needed concerning the age groups to be educated. During the present century certain concepts have been more or less accepted and certain standards have become more or less operative; for instance, most states have defined the age for admission to and the age for leaving school. Distinction has been made between permissive ages and compulsory ages for schooling.

Some standards are fixed by tested experience, others by statute. Similarly, there is divergence among the states as to the proper age for leaving school. The facts as to variability among the states governing the ages of entering and leaving school are important to research as a starting point for determining the number of persons to be educated.

New Concepts Add New Groups

Emerging concepts that will increase the numbers to be accommodated in schools are those of the kindergarten for *all* children, the nursery school, the junior college and the extension of the secondary school upward to include a thirteenth and fourteenth year. These programs involve the extension of the school program either downward from age 6 or upward from age 18.

If kindergarten instruction is to be made available to *all* children, research and experimental programs are needed to demonstrate how the advantages of kindergarten instruction may be made available to young children in small schools having too few pupils to make up a kindergarten class.

Workers in child development have long advocated the establishment of nursery schools for young children. The Work Projects Administration during the depression conducted a nation-wide nursery school program as a means of rehabilitating homes and of protecting children from the devastating effects of adverse economic conditions. With the advent of the war, nursery schools in increasing numbers have been provided for the education and care of young children of working mothers. Research is needed to obtain an

objective record of the nursery school program as it develops in different schools and to institute appraisals of those diverging programs which may be useful in guiding the development of nursery schools in the postwar period.

Attention has been called repeatedly to the fact that many of the abler high school youths of the United States fail to enter college because of adverse economic conditions. This issue is fundamental to the future improvement of democratic leadership. The reports of the American Youth Commission, the various studies and appraisals of the work of the National Youth Administration, the Civilian Conservation Corps and the Work Projects Administration and the many studies of youth by state, city and other research agencies have placed squarely before the people of the United States their obligations to youth.

Knowledge of Age Groups Helpful

In every state and subdivision thereof research should make a periodical accounting to the proper educational authorities of the numbers and characteristics of pupils between the minimum age of leaving school and the age of 21, showing the numbers of each age group in school, employed and neither employed nor in school.

At present many schools are conducting original and promising programs adjusted to the needs of those who formerly left school prior to graduation. Research should help locate the more promising of these programs and institute methods of appraising them in order that school authorities may have the benefit of tested knowledge for shaping the programs of all schools in the postwar period.

Not in decades has youth found so many and such varied opportunities for gainful employment as under the stress of a war economy. A record of those employed, the character of their employment and, in selected variations, an appraisal of its effects are needed.

Some⁷ have questioned whether release from school for farm work, especially when it involves migrant labor, may not contribute to delin-

⁷Schools and Wartime Delinquency, Subcommittee of the Public Schools and Teachers College Committee on War Problems and Responsibilities of Illinois Schools, N.E.A. Journal, May 1942, p. 151.

quency. Research should assist in obtaining a competent record and analysis of the war work experiences of high school youth. The principles evolved will prove a useful basis for administering the migrant labor of older youth in peace times.

During the depression, research paid too little attention to the effects of adverse economic conditions upon children, for example, the long-term effects on children of home relief or the lack of it. Perhaps research should help to answer this question before the generation that experienced the depression of the early thirties has left school.

The Maryland youth study⁸ and others have thrown light on the social and emotional outlook of youth during the depression. Research still has much to contribute to the public knowledge concerning the 50 per cent of young people who heretofore have not completed high school.

Some schools report that from 20 to 50 per cent of their 16 and 17 year olds have left school, and from some sections of the country those under 16 have been drawn from school by the lure of high wages. Are the schools keeping contact with these pupils? Are they receiving competent guidance in interpreting their work experience — its economic implications, its educational implications and so on—or will they move into the postwar period disillusioned as were the young people of the last war? Youth's experience during the present war may be an even more important subject for research than was the experience of the youth in the mid-thirties.

Schoolmen Need Guidance

Edwards has shown by states and regions the variations in birth rate, migration and distribution of different age groups. Similar studies are needed for the educational subdivisions, regions or communities of each state. Local school authorities need guidance in predicting future trends. They must plan school buildings, anticipate major financial policies, plan expansion or curtailment of staffs years in advance. Research ought to be able to devise formulas which could be applied locally subject to correction for supplying information which authorities need.

⁸Bell, Howard M.: Youth Tell Their Story, American Youth Commission, 1938.

PEACE *Will Bring New Problems*

Will your postwar plans be ready when peace comes?
Are you making surveys, considering consolidations,
planning buildings and redesigning the curriculum?

THERE are two aspects of educational postwar planning. The first is concerned with activities involved in planning for cooperation with a public works program aimed at solving the unemployment problem. The second includes activities involved in planning for changes in the educational program in order that schools may adapt themselves to changing conditions and serve more efficiently.

1. Cooperation With a Public Works Program: According to the report of the Interstate Committee on Postwar Reconstruction and Development: "By the end of this year the active working force of the country will approximate 62,500,000 persons. Of this number, some 11,000,000 will be in our armed forces and about 27,000,000 will be engaged in the production of war goods and services. War activities will thus absorb around 60 per cent of our effective working force. Only 24,500,000 persons will be employed in the production of civilian goods and services.

More Jobs Will Be Needed

"It has been estimated that, if we are to achieve full employment of all who want to work by 1946, we must by that year gear our economic system to furnish 56,000,000 civilian jobs. This means that we must provide 10,000,000 more jobs than were available in 1940."

These facts undoubtedly point to a program of public works and services. While the schools will not be responsible for solving the unemployment problem, they must cooperate in programs for its solution. Such cooperation will at the same

JOHN W. LEWIS

Assistant Superintendent, Baltimore

time result in improvement of educational facilities.

Projects selected for future building should be those having the greatest social value. If the educational authorities are not ready with postwar plans, projects of less value will be given priority.

Now Is the Time to Make Surveys

School projects should be in line with long-range educational plans of each state. Desirable consolidations and reorganizations will be blocked indefinitely in many cases if construction of permanent buildings of the wrong size and at the wrong places is undertaken. State departments of education that do not already have school building divisions should proceed at once to organize such divisions to make surveys and plans for future facilities. Each local district that may not be involved in any long-range plan of reorganization or consolidation should be making studies preparatory to planning its own program. In all contemplated building, due account must be taken of anticipated postwar shifts in population.

It is highly important that a determination of the need for educational projects be made by regularly constituted educational authorities. The Federal Works Agency is equipped to handle actual construction but is not and should not be qualified to pass on the desirability of educational projects. Any attempt to take from the educational authori-

ties their logical responsibilities should be vigorously contested.

It is highly important also that any planning of individual buildings take into account the projected educational philosophy and program of the school systems which they are to serve. Otherwise, the educational program may be cramped during the life of what may be a poorly planned educational plant.

There has been much agitation for planning schools for community use but suggestions toward this goal have, for the most part, been generalities. We need more serious thinking and planning for specific changes which will make our schools better adapted for greater community use.

Materials Should Be Studied

In order that maintenance experience may be reflected in improved standards and materials of new construction, it is highly important that revisions of standards be made promptly. A continuing study of new materials available will also prove invaluable. Many technical advances are being made which will give us new products and improved designs of old products. As these improvements are judged to be of value in new construction, standards and specifications can be changed.

Planning should include also surveys of needed school alterations and improvements. Plans for new heating, plumbing and electric installations, regrading and resurfacing of playgrounds should be prepared in advance.

Service projects not involving construction should also be considered. In the field of business administra-

tion, these projects may involve such services as installation of new inventory systems, reorganization of files, indexing and computations of floor areas and building cubages, wherever these are not already compiled as a basis for cost studies.

2. Planning for the Educational Program: Postwar planning for the educational program is not a new type of planning. It has always been the responsibility of good administration in order that education might adapt itself to changing conditions. The only significant difference in such planning today lies in the fact that changes in the social and economic pattern are proceeding at a more greatly accelerated pace than heretofore. We must reexamine our educational philosophy, our program, our curriculum and our methods in order that we may fulfill our responsibility more adequately and efficiently.

Is School Program Adequate?

We must reexamine the task we set for public education. Will our program develop the type of citizen qualified to control by democratic processes our increasingly complex social and economic system? Our rapid technological and scientific advances have outdistanced our social and political controls. Can we bridge the gap?

Our task is not merely that of imparting knowledge or even the ability to think on new problems as they arise. We have also the problem of developing a functioning motivation—a civic morality, if you will—which will give rise to conduct and action based not on selfish “chiseling” but on a code of social and civic decency. The world of old authoritarian controls of conduct seems to be dead and nothing has as yet replaced it.

Adult education is faced with the task of making up for the deficiencies of our educational program of the last thirty years so as to bring the members of our adult population up to the present demands made upon them as citizens. This is in effect a retraining program for effective citizenship. Training for leisure, the more widespread development of hobbies and participation in a broader sphere of cultural and artistic activities will be part of this responsibility.

The curriculum, particularly in

the field of secondary and vocational education, should be critically studied. How much of present practice represents tradition and how much can we justify on the basis of a critical analysis?

Extensions of the educational program at the lower age bracket to provide nursery schools or at the upper bracket to provide junior colleges should be carefully considered in the light of financial ability. If adequate funds are not forthcoming, additions to the program may be in the nature of watering the soup to make it go around.

Planning will undoubtedly result in a reevaluation of visual education. The experience of the Army has indicated that visual education will play a much more important rôle in the schools of the future than it has in schools of the past. School systems should begin to plan for making maximum use of this aid to instruction.

Prior to the war, the development of television had reached a technical

stage which would have permitted its release provided the commercial aspects could have been developed. What are its possibilities in relation to improvement of instruction? This, too, must be considered.

Without doubt the change in a variety of conditions at the end of the war will throw onto the shoulders of the wide-awake school administrator a host of problems requiring solution. To the degree that the administrator can broaden his outlook sufficiently to recognize the nature of these changes and the responsibilities of the school system in relation to them he can adjust himself efficiently to new conditions. He must do as much thinking and planning in advance as is humanly possible. It is equally important that his associates be stimulated to do their own independent thinking. After all, a school system will advance only to the degree that it reflects in its planning the united efforts of the teaching and administrative staffs.

When the Child Says, “NO!”

CHARLES B. PARK

Superintendent of Schools
Mount Pleasant, Mich.

ONE of the biggest challenges to a teacher in the classroom is that boy or girl who just won't respond as the others do. This youngster's only response to questioning about undone assignments is: “I haven't done it,” or a similar reply which indicates complete lack of interest. Deciding what to do with such a child taxes the ingenuity of the best of teachers. It requires careful study.

Parents and the public in general are likely to assume that every child should progress in school. Probably they are right to a large degree and we, as teachers, may not be doing our job well if we just let the unresponsive child drift.

Of course, if this boy or girl is mentally incompetent then the teacher is not to blame for the lack of progress shown; but should the child be normal or above normal, as

is frequently the case, and fails to keep up with his class it immediately becomes evident that a definite challenge exists and the teacher who fails under such conditions can offer only the timeworn excuse that the large size of the class makes it impossible to spend extra time with the uninterested youngster.

Every child has an interest of some description and if a teacher can discover this interest and use it as a point of departure in gaining the child's cooperation it may help to solve the problem. Teachers who are willing to spend a little extra time in and out of school on such children may eventually be repaid for their efforts in dividends far beyond their most optimistic expectations.

The important thing is not to give up after the first try. It may be difficult to find the solution, but it's worth the effort.



The Arvin Federal School, Kern County, California, consists of five gray, frame buildings.

THE San Joaquin Valley extends for miles through the heart of Central California, with a gigantic horseshoe of mountains separating it from the Pacific on the west and the great plains on the east.

Mountain streams roar down rocky canyons to empty their waters into lakes, rivers and canals which have turned this once arid region into a vast agricultural empire. It was the view of these green fields and orange groves dotted with black clusters of oil derricks that greeted the Joad family as they descended Tehachapi grade, hot, dusty and tired from their trek across the sweltering Mojave Desert, and that gave life and color to "The Grapes of Wrath."

Many other families, some like the Joads and others not, have descended this grade into the peaceful valley in search of work and a place to live and rear their children. They have come in great numbers, penniless refugees from the dust bowl, broken by hardship and poverty but strong in the will to conquer adversity, ridicule and the resentment of those they came to help.

Their tents in the course of time have given way to shacks; shacks, to cabins; cabins, to cottages and gradually settlements have grown up. These people have now taken root in the San Joaquin Valley. Their

SKIES CLEAR *for* Migrants' Children

If you've wondered about what has happened to the Joad children, here's the answer—at least in one county in the San Joaquin Valley

LEO B. HART

Superintendent, Kern County Schools
Bakersfield, Calif.

future is bright. The clouds of despair are disappearing and tomorrow gives promise of a brighter day.

The southern San Joaquin enjoys warm summers and mild, foggy winters. The temperature seldom goes below freezing in the winter and above the boiling point in summer. From harvest to harvest, the migratory workers move, their jalopies piled high with children and household goods. They pick cotton, dig potatoes and work with the lettuce and the fruit crops. They are the gleaners, the harvesters and the laborers—the life blood of the agricultural interests of the valley.

Children of these migratory work-

ers are fine, spirited youngsters. Many of them are tow-headed and possess a drawl and twang characteristic of the Southwest. They are affectionate, polite and appreciative, responding to kindness with a devotion that would win the heart of the coldest pedagog. They have a good sense of values and conduct themselves properly under guidance. They are anxious to learn the ways, manners and customs and to become a recognized part of the society in

which they move. Arvin Federal School offers them every opportunity to achieve the goal of their desire.

This school opened four years ago with five plain, gray frame buildings housing as many classrooms. A few boards on the outside were broken where baseballs and rocks had missed their marks and penetrated the flimsy siding.

The cotton stubble had just been freshly cut and cultivated on the 10 acre campus. There was no grass or water and there were no trees, shrubs or toilet facilities that first day of school when 50 ragged, sallow-faced, dirty and disheveled children faced their new teachers and new surroundings with questioning eyes and hearts. For them this was probably just another stop after weary weeks of travel.

Before the sun had set on that first day, these children knew that this school was different from the many others through which they had passed. Here were friends. Here were no specially privileged children who got the best desks, the best rooms, the best books and supplies and all of the teacher's attention. Here there were no partiality, embarrassment and ridicule, but instead love, friendship, understanding and guidance. Here at last was security.

Four years of building in connection with the Arvin Federal School have resulted in many improvements.

Lack of funds has been no obstacle. Volunteers have given their summers, Sundays and holidays that this school might carry on. The old buildings have been remodeled into cheery, attractive, modern classrooms. Green lawns now encircle the buildings, landscaped with shrubs from the school nursery. The school gardens furnish food and funds for the cafeteria where, during the lean years, a hot breakfast was served for a penny and a well-balanced lunch for two cents.

At first, meals had to be served out of doors but a classroom and adjoining adobe shelter were later converted into a cafeteria where all the youngsters now enjoy a generous midday meal and a bottle of milk for 6 cents each.

A five room stucco cottage, completely furnished, is the center for the home-making classes for girls of the intermediate and upper grades. Here, too, lessons are learned in manners, etiquette and health when various officials and community leaders are invited to dine as guests of these once unwanted migrants from the Southwest's dust bowl. Many a guest

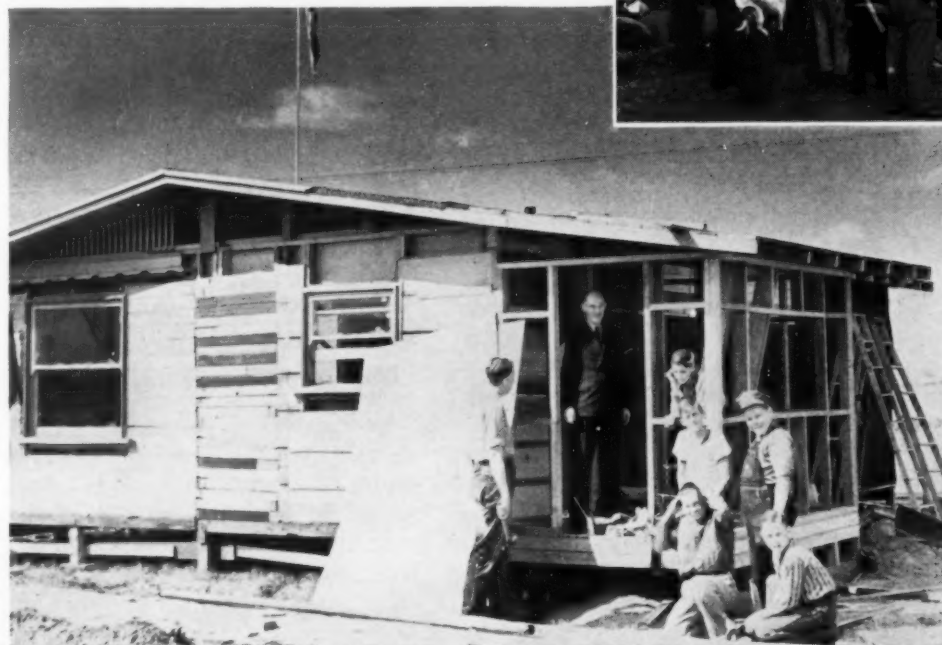
is surprised to learn that this cottage at one time consisted of two old box-cars and a lean-to and that the attractive furnishings were a classroom project of the upper grade girls.

Dental and medical care, rest and good food have improved the health of every child who attends Arvin Federal School.

It is a busy school with activity on every hand. The children are happy. The school is designed and operated for them. From the beginning only the finest teachers have been hired. Only the ingenious, enthusiastic and superior teacher could devise the tools and projects that have stimulated the educational and spiritual life of the school. There is nothing elaborate or pretentious about it but there is every evidence of a desire on the part of all to provide the needed facilities and to carry out a sound educational program.

The spirit of Arvin Federal School is felt by everyone who hears the laughter and sees the glowing cheeks and sturdy bodies of its children at play. One admires the efforts of those who labor here that the lives of these children may be enriched.

Boys remodeling the home-making cottage show their county superintendent the porch annex. A stucco finish was later applied.



Boys watch with interest the unloading of the potato planter that came to put in their two acre garden which furnishes food and funds for the school's cafeteria.

Elementary principals ask:

"Where Do We Stand?"

Their status in relation to higher school authorities is ambiguous and confused

L. E. LEIPOLD

Principal, Nokomis Junior High School
Minneapolis, Minn.

AN INTEREST in the present status of the elementary school principal led me recently to study the problem as it exists in representative American cities. The schools of 65 cities having a population of 50,000 and more were studied.

The conclusions reached, after an analysis of evidence relating to existing conditions in metropolitan educational systems, were definite and inescapable. They will undoubtedly be of interest to school people in general.

Causes of the Confusion

The factor that constantly came to the front during the analysis of these data was the extreme variations existing in the relationships between elementary principals and other personnel of the school system. The status of the principal almost everywhere is a doubtful one. Some of the confusion can be traced to a lack of regulations governing the principal's relationships, while some is undoubtedly due to a lack of clarification of the regulations already in existence so that a variety of interpretations may be made by different officials.

In some schools the principal is regarded as the responsible head to whom is delegated the power to interpret and to execute school policies. In other schools he is principal in name only, being dependent on the central office for the interpretation of policies and for instructions pertinent to the performance of his duties. Between these two extremes a variety of practices exists, influenced by the prevailing local conception of the status of the principal and by the personalities of the school officials concerned.

As local administrator, the typical elementary school principal has few of the powers of an independent school head. He is almost invariably the one central authority within the building to take care of routine matters and to exercise general administrative powers over his school, thereby giving a degree of unity to the

organization that would not otherwise be possible. His powers, however, are derived in the main from the central office. It is his function to administer the regulations transmitted to him by central office officials, his authority to administer independently ending when such higher regulations are met.

The principal may not select his teachers although it is his duty to rate them. If the rating is an unsatisfactory one, he may not dismiss or transfer a teacher, though he may make a request for such transfer to the central office. The school curriculums are determined for him; the testing program that purports to determine the effectiveness of the teaching program is prescribed by others, and the nature of the records he must keep relating to the progress made by the pupils of the school is likewise determined for him.

He Can—and He Can't

The principal must insist upon proper pupil attendance in classes and he may decide upon the time and the sequence of the classes held, although special courses, such as physical education requirements, are determined for him. He cannot select or dismiss members of his custodial staff, although he is held responsible for the proper performance of their duties. He does not assist in the determination of budget allotments, although he is held to such allotments after they are made.

The elementary school principal's rôle in the performance of his many duties is most frequently a co-operative one for his responsibilities are shared with others. He has sole authority only in matters of minor importance. Often he has the right to initiate certain functions over

which he has no further authority.

The relationships of the elementary school principal are complex for he frequently deals with one group of officials in administrative matters and with another group in supervisory affairs. He frequently aids in the formulation of the school system policies which it becomes his duty to administer, although the capacity in which he serves is most frequently an advisory one. Once local superintendents, elementary school principals are now largely supervisory and administrative officials acting under the direction and control of central office officials.

An analysis of current practices as disclosed in this study suggests a need for the codification of the rules and regulations governing the principal's relations and for their administrative interpretations. A definite, written allocation of duties of members of the school system personnel would undoubtedly result in a greater coordination of effort and a consequent clarification of the status of the principal. However, clarification must be obtained through the professional leadership of the schools' chief executive, the superintendent. Regardless of how well defined the principal's status may be, it is, nevertheless, determined by his superior officer in the main office and, consequently, it will vary from school to school and from city to city.

Individual Differences Alter Cases

Codification, therefore, of the rules and regulations governing the status of the elementary school principal should be subject to change by the superintendent of schools in order to take into account individual differences among principals and superintendents.

EACH MONTH A QUESTIONNAIRE IS MAILED TO
500 REPRESENTATIVE SCHOOL ADMINISTRATORS

THE NATION'S SCHOOLS

SCHOOL OPINION POLL

Sick Leave Allowances

FIVE days' sick leave with full pay is as much as most school board employes are currently getting and possibly as much as the majority of schoolmen believe they are entitled to.

Returns on the December questionnaire were 29 per cent. It was unfortunate that in several instances the superintendents replying admittedly recorded the present practice in their own school systems without stating whether or not such practice represents the ideal arrangement in their opinion. *These polls are to get opinion only and do not relate to local school practices*, except as reflected in the accompanying comments.

Sifting out the reports representing present school board practice rather than administrator opinion, as best the editors could, the trend seems definitely toward liberalizing sick leave allowances, making them cumulative and planning for long term illnesses.

While more than half of the administrators replying recorded a five day annual limit on sick leave, more than a third would grant ten days without pay deduction to certificated personnel and one fourth of them would allow other board employes ten days' sick leave without loss of salary.

Two opposing forces are encamped on the battlefield of cumulative sick leave. Some are rabidly opposed, but more than two thirds of the schoolmen replying favor cumulative sick leave allowances for teachers; they differ among themselves as to the limits. About three fifths favor cumulative allowances for noncertificated personnel, and most of those who favor it are liberal in allowances.

For the teacher group, the 70 per cent in favor of cumulative sick leave allowances are divided as follows: 24 per cent favor a 30 day limit; 18 per cent, a 15 day limit, and 16 per cent, a 20 day limit. The sky is the limit with only 7½ per cent.

When it comes to other school workers, of the 58 per cent favoring cumula-

QUESTIONS ASKED OPINIONS EXPRESSED

1. How many days do you think school board employes should be permitted to be absent for personal illness without loss of pay?

CERTIFICATED PERSONNEL	
Five days	55 %
Ten days	34
Miscellaneous days	10.3
No days	0.7

NONCERTIFICATED PERSONNEL	
Five days	53%
Ten days	26
No days	11
Miscellaneous days	10

2. Do you think sick leave allowances should be cumulative?

CERTIFICATED PERSONNEL	
No	30 %
Yes, up to 30 days	24
Yes, up to 15 days	18
Yes, up to 20 days	16
Unlimited days	7.6
Miscellaneous days	4.4

NONCERTIFICATED PERSONNEL	
No	42%
Yes, up to 30 days	18
Yes, up to 15 days	16
Yes, up to 20 days	13
Unlimited days	7
Miscellaneous days	4

3. To cover the cost of long term illness of school board employes which plan do you favor?

Mutual disability insurance	33 %
Commercial group insurance	28
Board-employe plan	22
No plan	11.5
Board responsibility	5.5

tive allowances, 18 per cent suggest a 30 day limit; 16 per cent, 15 days, and 13 per cent, 20 days. Five per cent would permit sick leave to accumulate indefinitely.

For long term illnesses most schoolmen replying turn to one of three methods of coverage: a mutual disability insurance plan, a commercial group insurance plan and a self-insurance scheme by which board and employe would share the cost of illness.

Percentages in each instance were as follows: favoring a mutual disability insurance plan, 33 per cent; favoring a commercial plan, 28 per cent; favoring a board-employe sponsored and managed plan, 22 per cent.

Several correspondents point out that the mutual disability insurance plan better fits the needs of the large school system and the commercial group insurance plan, the small school system.

The growth of Blue Cross hospitalization and medical service plans is reflected in some of the answers and the spread of these nonprofit services will no doubt become a growing factor in school employe protection. A few schoolmen look to the federal government for this type of protection through the Wagner Bill or some other extension of the Social Security Act.

On the comment section of the questionnaire some administrators complained of teachers teaching when ill under the no-allowance plan while others reported teachers taking advantage of sick leave allowances when they could just as well be teaching.

One superintendent thinks the questionnaire on the silly side, stating that "reasonable and tolerable service and treatment on the part of employe and employer should be our goal rather than hard and fast rules."

Many others echo F. C. Barnes of Drew, Miss., who writes: "I shall be interested in seeing a summary of thinking on this topic. The plan we are following is not satisfactory. We are seeking a better plan."

Wisconsin and California have state legislation that takes care of the problem so far as certificated personnel is concerned. California's legislation provides five days' sick leave annually cumulative to 25 days. It also covers long term illness.

Wisconsin's law makes mandatory a five day sick leave a year, cumulative to 30 days.

How the War Affects Children

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and

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THE impact of the war on the minds of high school boys and girls is tremendous. It is a part of their everyday thinking and feeling to such an extent that it is now vitally affecting their behavior and is likely to alter the courses of their lives. All persons concerned with the care and guidance of these future American adults need to know the ways in which the war and its implications are part and parcel of their lives.

During the 1942-43 school session, 2138 junior and senior high school pupils (935 boys and 1203 girls) in Texas were asked to list their five most urgent out-of-school concerns. These were free-association responses. The age and sex distribution of pupils from whom data were obtained is shown in table 1.

These young people listed 7589 different problems. Of this number 712 are war-related problems. Table 2 shows the major classifications into which the various problems fall. It shows that concerns related to the war and conditions resulting from the war rank fifth among 11 major problems. War problems rank lower than problems of social life, family relations, personality and use of time but rank higher than financial problems, future occupation, health, transportation, part-time jobs and morals and religion.

Among the boys the war-related problems rank below social life, family relations and adequate use of time. Among the girls these war-time problems rank lower than social life, family relations, personality, adequate use of time and future occupation.

It is evident that problems related to the war are among the most prevalent concerns of junior and senior high school pupils. Boys are much more concerned than girls with these problems, as would be

expected, but the high rank of war-related problems among girls is probably just as attention-worthy, if not more so. Whereas most boys will go into the armed services in large numbers, most girls will not be able to solve their problems in this way.

The out-of-school problems of in-school youth that are related to the war may be classified into four categories:

1. Problems concerning entrance of the individual into the armed forces; for example, "Shall I try to

go to college as long as I can or should I join the armed forces as soon as I get out of school?"

2. Problems relating to friends or relatives; for example, "My mother is worried because my brother is in the war zone."

3. Information about the war; for example, "I am not able to understand news broadcasts, strange names and places."

4. Family and community problems; for example, "I have to work longer hours because of labor shortages."

Table 1—Age and Sex Distribution of 2138 Junior and Senior High School Pupils Included in This Study

	AGES										Total	Per Cent
	12	13	14	15	16	17	18	19	20	21		
No. Boys.....	2	32	102	275	317	155	49	3	935	43.7
No. Girls.....	3	18	108	374	485	166	43	3	2	1	1203	56.3
Total.....	5	50	210	649	802	321	92	6	2	1	2138	100

Table 2—Frequency of Mention of 11 Major Types of Out-of-School Problems by 2138 Junior and Senior High School Pupils in 25 Texas Schools

	BOYS		GIRLS		BOTH	
	Total	Rank	Total	Rank	Total	Rank
Social Life.....	534	1	1217	1	1751	1
Family Relations.....	516	2	1193	2	1709	2
Personality.....	313	7	660	3	973	3
Adequate Use of Time.....	432	3	511	4	943	4
War Problems.....	412	4	300	6	712	5
Future Occupation.....	368	5	342	5	710	6
Finances.....	336	6	284	7	620	7
Health.....	202	9	169	8	371	8
Transportation.....	199	10	142	9	341	9
Part-Time Jobs.....	206	8	131	10	337	10
Morals and Religion.....	31	11	91	11	122	11
Total.....	3549		5040		8589	
Per Cent.....	41.3		58.7		100	

These four categories are subdivided into more specific types of problems as shown in table 3.

Americans in general, and educators in particular, can readily see in table 3 the task that faces us. School and community agencies must help these young people to adjust to war-time living. Even when this is done, there are likely to be scars that remain to tether the otherwise normal courses of thinking and living.

Classification and tabulation of the problems of these adolescents do not tell the whole story. The following typical statements reveal the intensity with which these problems are felt.

"My constant worry is over my [only] missing brother and the other boys in the service." (Girl, 16.)

"Will the war get our fathers in the Army?" (Boy, 17.)

"Will I get out of high school before I am drafted?" (Boy, 17.)

"I am trying to figure out whether [sic] to finish school or join the Marines on my birthday in November." (Boy, 16.)

"I worry about the outcome of the war, the effects upon my family and its security, myself and my future and several persons in the service

whom I love very dearly." (Girl, 16.)

"I can't help worrying about small things and the war. They distract my mind from my lessons." (Girl, 16.)

"The war situation is bearing upon my mind so vividly that I can't sleep." (Girl, 16.)

"How can I arrange my study period at home so [sic] to get some kind of defense work in?" (Girl, 15.)

"The war has affected me by my parents moving." (Boy, 16.)

"I would like to move back to my home town. I wonder if I'll ever move back?" (Boy, 13.)

"We believe in democracy and that everyone has a right to believe in what they want. Is it wrong for the German people to believe in Hitler?" (Girl, 16.)

"I like to be optimistic but my parents and nearly all the adults around are so pessimistic about the war that it makes me feel like a flity [sic] gadabout girl if I don't go in tears over it." (Girl, 15.)

"This tire and gas rationing is my main problem." (Boy, 15.)

"I worry about my father not being able to get drivers for his trucks and not getting goods to sell." (Boy, 15.)

"I worry about where my family will be next year and if we will all be alive and in a safe place to live." (Girl, 17.)

We present this information without interpretation. The implications are obvious. Parents, teachers, school administrators, sociologists and psychologists must be concerned with the war-time problems of American youth.

At least two major complications stand out in sharp focus: (1) adult Americans are having many of the same problems as is youth and are often as confused as adolescents and (2) schools are faced with personnel problems that make it difficult to furnish as effective guidance as would be possible in normal times.

The young people of America have a remarkable capacity for bearing war-time burdens, yet this fact does not lessen society's responsibility to them. As the war continues, the problems of youth will be intensified and magnified. Reluctant as many are to believe these problems important, they do exist and they are urgent. The nation's schools must accept more responsibility in this connection lest youth view education with disillusionment.

Table 3—Types of War-Related Problems Mentioned by Junior and Senior High School Pupils in 25 Texas Schools

Nature of Problems	BOYS			GIRLS			BOTH		
	Sub-Total	Total	Rank	Sub-Total	Total	Rank	Sub-Total	Total	Rank
PROBLEMS CONCERNING ENTRANCE OF THE INDIVIDUAL INTO THE ARMED FORCES.....		227	(1)		17	(4)		244	(1)
Indecision as to whether to enlist or be drafted.....	111			9			120		
Desire for more specialized training in high school so as to be better prepared for military service.....	36			6			42		
Concern about being drafted before finishing school.....	34			2			36		
Concern over what branch of service to enter.....	30			...			30		
Desire to enlist, hindered by age, parents, health.....	16			...			16		
INFORMATION ABOUT THE WAR.....		101	(2)		112	(2)		213	(2)
Concern over personal contribution toward winning the war...	37			45			82		
Concern over what conditions will be during and after war...	36			36			72		
Concern over who is going to win the war and when.....	21			20			41		
Desire for an understanding of the war and the reasons for it	7			11			18		
PROBLEMS RELATING TO FRIENDS OR RELATIVES.....		26	(4)		115	(1)		141	(3)
Worry about relatives or friends in armed services.....	9			68			77		
Concern about drafting of relatives or friends.....	17			47			64		
FAMILY AND COMMUNITY PROBLEMS.....		58	(3)		56	(3)		144	(4)
Unhappiness because of moving necessitated by war.....	20			28			48		
Problems of rationing: food, tires, gasoline, gasoline stations going out of business.....	19			11			30		
Labor shortage: farm hands, cooks, housekeepers.....	19			9			28		
Concern over town becoming less attractive.....	...			5			5		
Concern over problems connected with military personnel...	...			3			3		
Total.....		412			300			712	
		57.9			42.1			100	

A study of LIFE EARNINGS of teachers in Michigan

F. MORSE COOKE

Principal, High School
East Lansing, Mich.

TEACHERS' salaries vary widely according to the type of teaching service rendered, namely, elementary teaching, elementary administration, secondary teaching, secondary administration and general administration.

Another range of salary variables is dependent upon the types of areas in which the service is rendered, namely, rural-township-village schools, small-city schools and large-city school systems. Still other major differences occur as between the average salaries paid women and those paid men teachers. Additional variations occur according to types of teaching service besides those cited.

Any estimate of life earnings in teaching based upon annual earnings received during a one, five or ten year period disregards the major changes in salary trends that have occurred during the period of years in a teaching lifetime.

In the limited space here available, although some of the variables mentioned have been considered, the data for teaching groups in Michigan have been combined and brief summaries of the following items will be presented:

1. Salary trends for elementary and secondary women teachers for the period from 1900 to 1935, inclusive.
2. Salary trends for elementary and secondary men teachers for the period from 1900 to 1935, inclusive.
3. Professional life rewards for teaching.
4. A comparison of the actual life earnings of teachers and life earnings estimated for other professions.

This report is based on an analysis of actual life case histories of teachers who have recently retired from teaching in Michigan.¹

For classification purposes the rural-township-village school areas include those having populations up to 2500; small cities include population ranges from 2500 to 100,000, and large cities are those with populations in excess of 100,000 persons.

Salary Trends for Women Teachers

Since the average woman teacher taught approximately thirty-seven years, a brief review of the trend of average salaries by five year intervals for the years 1900 to 1935, inclusive, should give a fair picture of the average annual salaries received by women teachers during their lifetime.

Elementary Teachers: The largest percentage of women teachers is engaged in elementary work; hence, in table 1 is shown a summary of salary trends in the three classes of areas served. From average salaries in 1900 of \$281 for rural women, \$406 for small-city women and \$550 for large-city women, there was a consistent rise in salaries in all areas during the fifteen years up to 1915. The rural group experienced an 87 per cent increase to an average of \$526 in 1915; the small-city group salaries increased nearly 72 per cent to \$698, and the large-city group salaries averaged \$913 in 1915, an increase of 66 per cent.

The period of most rapid salary

¹Cooke, F. Morse: Life Earnings of Teachers in Michigan. Unpublished doctoral dissertation, University of Michigan, 1942. Pp. 271.

rise was that from 1915 to 1925 when for all groups the average salary more than doubled.

The next decade included the depths of the depression and even though salaries in some areas struck the bottom in 1932 to 1933, after reaching their high points in 1928 to 1930, teachers' salaries regained by 1935 a small part of their depression losses and averaged for rural women \$735, for small-city women \$1436 and for large-city women \$2199. Rural women teachers suffered the largest depression decline in salary in the five years from 1930 to 1935 amounting to nearly 33 per cent, small-city women 15 per cent and large-city women only 5 per cent.

Secondary Teachers: Secondary teaching is the type of service in which the second largest percentage

TABLE 1—AVERAGE ANNUAL SALARY TREND OF WOMEN ELEMENTARY TEACHERS

YEAR	RURAL-TOWNSHIP-VILLAGE	SMALL-CITY	LARGE-CITY
1900	\$ 281	\$ 406	\$ 550
1905	362	482	640
1910	459	601	806
1915	526	698	913
1920	948	1412	1762
1925	1057	1594	2095
1930	1092	1699	2325
1935	735	1436	2199

of women teachers is engaged. Table 2 shows the trend of salaries for this group from 1900 to 1935. The pattern follows fairly closely the one already described for women elementary teachers. However, in 1935 secondary teachers' average salaries were \$201 for rural teachers, \$259 for small-city teachers and \$518 for large-city teachers greater than those paid elementary teachers for corresponding areas.

TABLE 2—AVERAGE ANNUAL SALARY TREND OF WOMEN SECONDARY TEACHERS

YEAR	RURAL-TOWNSHIP-VILLAGE	SMALL-CITY	LARGE-CITY
1900	\$ 523	\$ 591	\$ 730
1905	715	701	843
1910	800	810	1062
1915	744	907	1286
1920	1334	1708	2216
1925	1471	1978	2580
1930	1457	2082	2842
1935	936	1695	2717

Salary Trends for Men Teachers

Elementary Teachers: In the earlier years of this century most men who were serving as elementary

teachers were in the rural and village schools. Although there were relatively few complete case histories available in which the greater part of the man teacher's life had been spent in elementary teaching in small or large cities, an attempt has been made in table 3 to show averages which will permit comparisons between the three areas. It is evident that these trends follow those indicated by women's salaries showing, namely, a consistent rise from 1900 to 1915, nearly a hundred per cent increase in the next fifteen years from 1915 to 1930 reaching their high point in 1930 and the effects of the depression slump from 1930 to 1935 on the rural and small-city groups of teachers.

Secondary Teachers: By far the largest group of men engaged in classroom teaching in the public schools is in the field of secondary education. In table 4 the average an-

TABLE 3—AVERAGE ANNUAL SALARY TREND OF MEN ELEMENTARY TEACHERS

YEAR	RURAL-TOWNSHIP-VILLAGE	SMALL-CITY	LARGE-CITY
1900	\$ 307		\$ 750
1905	430		908
1910	553		1133
1915	650	\$ 750	1400
1920	1072	1080	2400
1925	1141	1250	2700
1930	1180	1600	2800
1935	894	1350	2800

nual salary trend for this group is presented. For the period from 1900 to 1915 the rural group experienced the greatest average salary increase of any of the groups considered, a rise from a \$600 average in 1900 to \$1485 in 1915. The other two groups enjoyed sizable increases; the small-city men's salaries increased from \$833 in 1900 to \$1493 in 1915 and the large-city men's salaries increased from \$988 in 1900 to \$1671 in the year 1915.

During the next fifteen years the rural men's salaries did not continue to rise as rapidly and reached the high of \$1668 in 1925. The small-city group experienced a greater upswing in the same period reaching their maximum average of \$2452 in 1925. The large-city group salaries continued to rise to the maximum average of \$2880 in 1930.

As was the case with the women teachers' salaries, the rural group of men teachers suffered the largest percentage of depression reduction, 33

TABLE 4—AVERAGE ANNUAL SALARY TREND OF MEN SECONDARY TEACHERS

YEAR	RURAL-TOWNSHIP-VILLAGE	SMALL-CITY	LARGE-CITY
1900	\$ 600	\$ 833	\$ 988
1905	630	1081	1231
1910	983	1141	1415
1915	1485	1493	1671
1920	1410	2094	2439
1925	1668	2452	2722
1930	1607	2450	2880
1935	1117	1899	2617

per cent; the small-city group salaries dropped 22.5 per cent, and the large-city group maintained the best average losing only 9 per cent from their 1930 high point in 1935.

Average Life Earnings for Teachers

Women Teachers: The entire group of women included in this study averaged approximately thirty-seven years of teaching service. The average actual life earnings received by those whose work was predominantly elementary teaching is \$37,184; for those in secondary teaching \$52,802, and for those in elementary administration and/or supervision \$57,773.

The average life earnings received by all the women studied is \$42,376. This larger group included some in secondary administration and/or supervision and some in general administration as well as those whose earnings have already been reported.

Considering the life earnings of women teachers classified on the basis of the type of area served, it is significant to note that women teaching the greater part of their lives in rural-township-village schools averaged life earnings of \$22,483 for thirty-four years of service; small-city women teachers received average life earnings of \$39,372 for thirty-nine years of service, and large-city women teachers received \$57,113 average life earnings for approximately thirty-six years of service.

Men Teachers: The average number of years of teaching service for the men included in this study is practically the same as the average for women. Men who spent the greater part of their lives as elementary teachers averaged life earnings of \$27,332. Most of these men were in the rural schools. Those men whose work was primarily in secondary teaching averaged \$62,905 in life earnings. Considering all the cases of men in the study, which

includes some histories of men in elementary administration and/or supervision as well as general administration, the average life earnings for men teachers is \$55,956.

Classifying the men teachers studied on the basis of the type of area in which their teaching service was rendered, the advantage of small-city and large-city teaching location is even more striking than that shown for women teachers. The men whose service was rendered chiefly in rural-township-village schools, for an average life service of thirty-five years, received average life earnings of \$35,623. Those men in the small cities, for thirty-six years of service, received average life earnings of \$66,406, an amount 86 per cent greater than that received by the rural men.

The men whose forty years of service were spent in the large cities received average life earnings of \$98,523, an amount 177 per cent greater than that received by the rural men and even 48 per cent more than that received by the small-city men.

Though the large-city men taught in their lifetimes on the average from 11 to 14 per cent more years than their rural-township-village and small-city professional brothers, nevertheless, the more extensive taxing base of the small-city and large-city school systems seems to be a fundamental factor in providing a higher average salary for teachers.

Are not the higher average salaries, better within-the-system transfer and promotion possibilities and, hence, added security from petty criticisms too often directed against teachers in small community schools basic arguments in favor of the organizing of schools on a broader tax area and more serviceable administrative organization?

Has not an increasing awareness on the part of young teachers of this wide salary differential between the rural and city areas contributed to the shortage of rural teachers even before the present war boom?

Life Earnings in Professions

The earnings reported here have been compiled from actual case histories of teachers some of whom were teaching before the beginning of the current century. Wide variations in academic and professional training obviously are present. Likewise, variations in the value of a dol-

lar and in the cost of living over the forty to fifty year period are recognized as factors involved in considering increase or decrease in earnings, but space does not permit their discussion here.

The most comprehensive study of life earnings in the professions is that by Clark² who attempted to review all fragmentary studies and by combining results obtained estimates, with full recognition of the possible errors involved, of life earnings. His estimate for school teaching is \$70,300 as compared to \$42,376 for women, \$55,956 for men or \$44,738, the average life earnings for all teachers in the study. Although Clark's study was based upon a shorter, more recent period of years and perhaps included more reports based upon small-city and large-city salaries than for rural teachers' salaries, there still seems to be a fairly wide difference between the actual and his estimated life earnings for teachers.

Since approximately 80 per cent of teaching is done by women, their life earnings might well be compared to Clark's estimate of \$23,000 for nursing and \$94,000 for library work, largely women's professions.

The average life earnings of \$44,738 for all teachers does not compare too favorably with the Clark estimates for the various professions as shown in the following table:

TABLE 5—LIFE EARNINGS IN PROFESSIONS

PROFESSION	LIFE EARNINGS
Nursing	\$ 23,000
School Teaching—Women:	
Rural-Township-Village	22,483
Small-City	39,372
Large-City	57,113
All Areas	42,376
*School Teaching—Men:	
Rural-Township-Village	35,623
Small-City	66,406
Large-City	98,523
All Areas	55,956
School Teaching	70,300
Ministry	87,000
Library Work	94,000
Journalism	98,000
Social Work	118,000
College Teaching	160,100
Architecture	205,000
Dentistry	216,000
Law	232,000
Engineering	238,000
Medicine	239,000

*These items are the results of the findings in this study; the others have been compiled from Clark's study.

²Clark, Harold F.: *Life Earnings in Selected Occupations in the United States*. New York: Harper and Brothers, 1937. Pp. 408.

Worth Fighting For

THE executive committee of the National Commission for the Defense of Democracy through Education met in Washington, D. C., in late September at which time five statements of principles bearing on current issues were adopted as follows:

Defense of Schools and Teaching

The nation's welfare demands that American teachers serve the children in their charge honestly and fearlessly so as to further the best interests of democracy. The commission will seek to defend the schools and the teaching profession:

1. Against unjust dismissals of school personnel.
2. Against restrictions upon the political freedom of teachers, their right to teach the truth and to organize in professional associations.
3. Against the domination or control of education by any group.
4. Against the intrusion of partisan propaganda into courses of study.

Education and World Peace

Since it is only through education of the masses that real democracy can exist, it is imperative that education be considered at the peace table and that means be devised to foster the free and unbiased training of the masses of the world. A permanent organization must be established for encouraging world-wide education and for protecting schools from propaganda and political control.

The commission will continue its efforts to obtain a consideration of these objectives.

Child Labor

Child labor is increasing. Children are being employed illegally. Enforcement of school attendance laws is lax. Children are working after school without protection with respect to hours and working conditions. The commission urges:

1. That child labor and school attendance laws be enforced.
2. That defects and low standards

in child labor laws be corrected and the weakening of present laws by amendment be prevented.

3. That the gravity of the situation be made clear to parents, public officials and the public.

Juvenile Delinquency

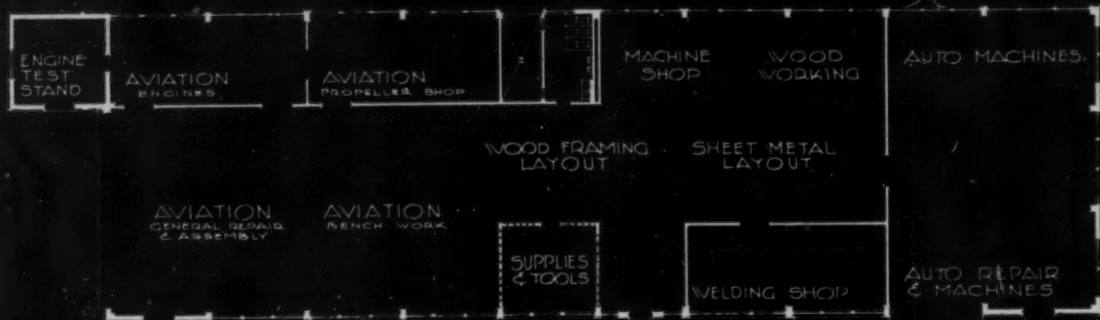
Competently staffed schools constitute the most important and effective agencies for preventing juvenile delinquency. The problem cannot be met until the following standards are maintained in each state:

1. Enough well-prepared and well-compensated teachers to give personal study and attention to every child.
2. Full school terms for all up to age 18.
3. Courses adapted to abilities and interests of all children; special guidance for atypical children.
4. Well-equipped, well-located and fully utilized buildings.
5. Adequate school attendance laws administered by social workers.
6. Cooperation between schools and social service agencies.

An American White Paper

The commission favors an American White Paper on Education containing plans for changes and higher standards to meet the needs for improvement in the education of the masses. Plans should be made for:

1. Education of all children up to age 18.
2. Opportunity for college education or advanced technical training for those who can profit by it.
3. Postwar education of service men and women and war workers.
4. Extension of adult education.
5. A competent, well-paid teaching force in all sections of the country with better salaries and working conditions.
6. Medical inspection and treatment of children, mental and behavior clinics, social case work and adjustment classes for those requiring them.
7. Provision of adequate school plants, equipment and grounds.



SHOP BUILDING



FIRST FLOOR
CLASS ROOM BUILDING

SCHOOLHOUSE

Planning

Let's Be Realistic *about* POSTWAR CONSTRUCTION

REGINALD E. MARSH

Tooker & Marsh, Architects
New York City

EVERY man, woman and child will be affected by developments after the war and although victory is not yet here and we are warned that we have yet a long way to go, it is important that we look ahead and become realistic in our planning and thinking.

Much has been written and said about postwar construction. Generally this has involved the problem of creating jobs during the readjustment period but considerable attention has been given, particularly in magazine articles and advertising, to the revolutionary products that will be introduced at that time.

It is not my purpose to appear as a prophet but this is a subject that should be considered from a practical and objective standpoint. If the creation of jobs immediately following the end of the war is of paramount importance—and there are few who will argue this point—then is it wise or fitting to create in the minds of those who are hoping or planning to build the fear that anything we do now will be obsolete in the postwar period?

No World Transformation Coming

It is time that the type of propaganda which pictures a world transformed be "debunked" and that the ballyhoo for the advertised "dream house," as Mrs. Dorothy Rosenman, chairman of the National Committee on Housing, has so aptly put it, should be ended. There will be a need for many thousands of new buildings, including schools, hospitals and similar institutions, after the war for various reasons, such as

"I urge that school officials and laymen associated with school activities recognize the importance of planning now. There is no evidence of any so-called revolution in the building material field to come after the war. Wise school authorities will have their plans ready for action at the 'Go' signal."

obsolescence and the normal requirements that have been retarded by government restrictions.

Present Construction Temporary

True, there has been a tremendous program of construction of defense housing. Most of this has been of a temporary character, however, and this article is considering the so-called permanent building field.

As a matter of fact, there is actually no evidence of any so-called revolution in the building material field or in the industry itself. There are words, yes, plenty of them, but nothing else. There is no denying that the war has brought wonderful developments in some of the arts that apply to building—plastics, for example. But this is a material and not a new method of construction or a new idea of equipment.

A sink will be a sink regardless of the material of which it is made. It will serve the purpose for which it is intended and its fittings must be

utilitarian. It should not be a difficult matter to substitute, provided a substitute should be developed that will prove economical, more attractive in appearance or better for any other reason. The same applies to hardware, lighting and similar equipment.

Certain aspects of the situation as affecting postwar construction should be kept in mind. We are faced with a serious situation involving all materials in the coming transition from a war to a peace basis. For this reason, it is possible even that we shall see the continuation of federal control, at least until certain adjustments are made. The conversion of plants from war to peace production cannot be effected overnight. In the meanwhile there will be a tremendous demand for building materials. The supply available will determine the volume and speed of construction programs.

New Uses for Existing Materials

The war has seriously depleted lumber inventories. There is great danger that unless stocks are permitted to accumulate and the wood is given time to season building standards will suffer. This may logically result in a tendency toward a more extensive use of fireproof materials, such as stone, concrete, steel, brick and tile. For this reason it would be well to consider the possibility of new uses and applications for existing materials.

Price will be a determining factor in the selection of construction materials, which is another reason for the prophecy that there will be few

Manufacturers will gladly listen to your pet peeves and the ideas you want developed. What do you have to suggest in the way of new and improved building materials, equipment and specialties? The clearinghouse Mr. Marsh suggests is hereby established. Send your suggestions to the Postwar Planning Committee of *The NATION's SCHOOLS*, which will pass them along to the proper manufacturers. However, if you think your idea is patentable, you should protect yourself

radical changes in the immediate future anyway. Time will be required to develop the necessary volume of new products to compete with those that are more familiar.

New Products Need Study

Such studies are now being made, however, and should be made by every thoughtful architect. In a recent survey the illuminating truth was revealed that aluminum window casing will undoubtedly compare favorably in price with wood, considering the cost of installation. Undoubtedly, there will be other similar startling revelations.

What, then, can we say about postwar architecture? Certainly, that the era of overelaboration of ornament and detail is over. Buildings will be simplified and somewhat streamlined in accordance with the trend of the times. The plan will be the important thing. This need not mean that we will have to design our buildings like boxes with slits for windows. So-called modern architecture can be and already has been carried to such an extreme that the pendulum is now swinging back. Simplicity can be attained without losing the sense of proportion and a feeling of charm can be retained even in small detail.

Prefabrication is much in the wind. Here again I differ with those who claim that prefabrication is the real solution to the postwar building problem in either the home or institutional field. Each one of us has his own likes and dislikes. Most people want individuality and, there-

fore, are not attracted to a home that is almost identical with that of their next-door neighbor or a replica of one on the next block. This has been proved in communities actually built up of homes of repetitious design.

The only favorable features of prefabrication are speed of erection and low cost. Isn't it reasonable to assume that the homeowner would prefer to wait a little longer and pay a little more in order to have his own home, something that represents his own personal preference in both plan and design rather than a bargain package sold on a quantity basis?

Standardization Undesirable

Similarly, no community wants a school building exactly like or even remotely similar to one in a neighboring community. This is one reason why school buildings should not be standardized.

Prefabrication, on the other hand, is possible and unquestionably practical when applied to certain units that can be incorporated in the building. Architecture should not be turned out on a factory basis either for schools or for homes.

Color deserves serious consideration in our postwar planning. A wise selection of materials providing contrasting but harmonizing colors can be made. The use of color must be studied carefully as it applies not only to the building itself but also in relation to its environment.

All this is not a problem solely for

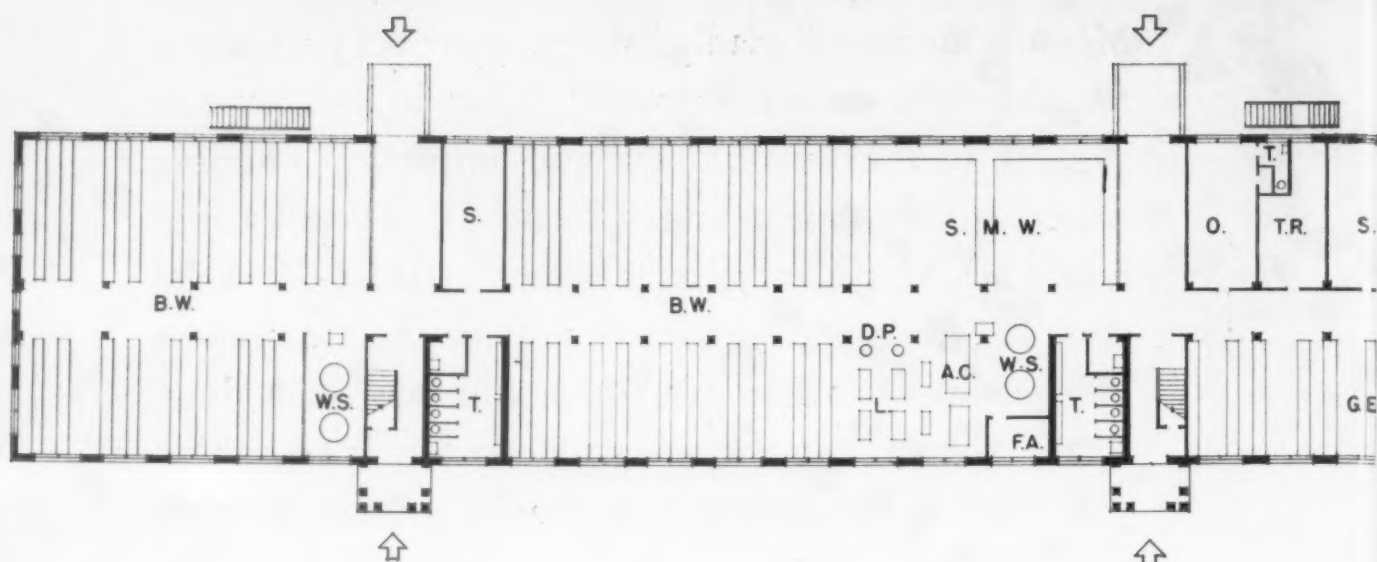
the architect whose ingenuity is supposed to be one of his basic virtues. It is up to the layman, whether he is associated with a school, hospital or any other specialized business or profession, or a man entrusted with building a home. Manufacturers are looking for ideas for new gadgets or for improvements of old devices.

Tell Manufacturer Our Wants

In this connection why couldn't a clearinghouse be established to consider such ideas and to pass them along to the proper manufacturers who would be happy to get them? It should not be necessary for the manufacturer to tell us what we must buy and get along with. It is up to all of us to tell the manufacturers what we need and want.

Again without any claim to prophetic gift but merely from conclusions based on truths that are obvious, I urge that school officials and laymen associated with school activities recognize the importance of planning now. It should be kept in mind that the construction industry is about the biggest industry in this country. It involves not only labor on the job but also labor required to fabricate the materials and equipment and labor in the field where much of the basic material must be obtained.

There is every reason for confidence in the future. Numerous changes may be expected, to be sure, but these will apply more directly to equipment than to the basic elements of sound construction.



Government Schools offer architects concrete examples of functional planning for vocational departments of public schools after the war . . . no frills, no waste of space . . . efficiency . . .

WITH the important rôle that shop work will play in the postwar school, there is much to be learned from the war-time vocational training schools instituted by the armed services. In the press of war conditions, it is a matter of life and death to train unskilled men to their respective duties in the shortest possible time. They must learn quickly, yet they must learn well. They must know their jobs intimately because upon that knowledge depend the lives of their comrades and the winning of the war.

For Advanced Vocational Work

Many temporary vocational training schools have been erected during the war by the Army, the Navy, the Coast Guard and the Maritime Service. In at least two instances these training schools have been planned as permanent institutions, which will undoubtedly stand as the best examples of advanced vocational training centers for their particular skills: the U. S. Coast Guard training school for petty officers, near New London, Conn., and the U. S. Mari-

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New York City

time Commission Merchant Marine Academy for officers' training at Great Neck, N. Y.

Both are advanced schools, the latter even being called the Annapolis of the Merchant Marine, but their significance to school architects and educators lies in the fact that they are actually trade schools advanced to the collegiate status.

In examining these vocational schools of a military or semimilitary character, the first impression is one of strict functional planning—no frills, no waste of space—buildings showing simply a study of the requirements, an analysis of the machines, tools or materials to be used for instruction and an expression in the simplest architectural terms of the resultant plan.

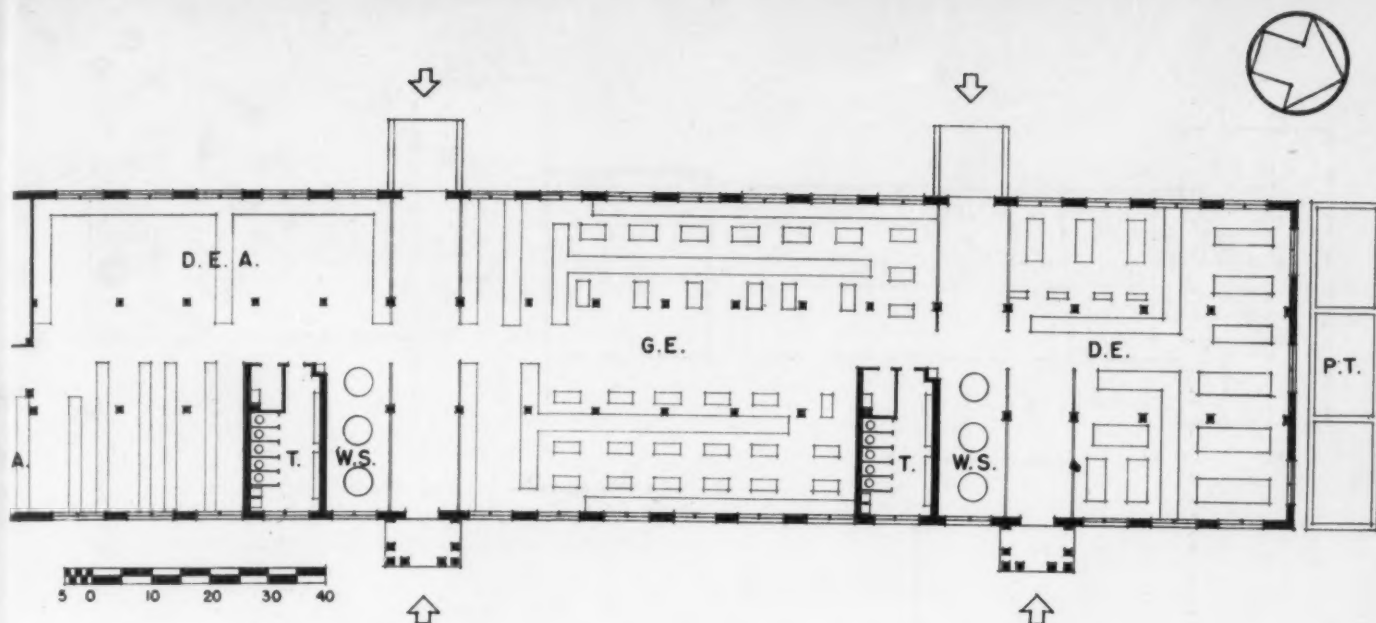
The necessity for economy and the restrictions on the use of critical building materials have resulted not only in simple building forms but in a reevaluation and study of new

uses of well-known materials and possibilities in others not so well known. This also will have its effect after the war as architects and builders by that time will have a greater appreciation of the possibilities, both for economy and for better expression of a building's function, inherent in the various products used in building construction.

Planning for Machine Work

Machine work is the trade that has most occupied the military training schools. The plan of an engineering building which the Coast Guard erected as a temporary school for the training of motor machinists' mates is reproduced. This building, 465 feet long and 57 feet wide, is subdivided into five sections by "islands" consisting of entrance vestibules, stairs, toilets and washrooms.

Bench work facilities for both hand tools and small motor-driven tools occupy most of two sections. Here simply designed benches are installed at right angles to the walls with electric "bus" ducts overhead making it possible to plug in the motor-pow-



First Floor Plan—Temporary Engineering Building
U. S. Coast Guard Training School, Groton, Conn.

ered tools as desired. The two sections at the north end are used for the demonstration of various types of gas Diesel-powered engines.

Interesting is the fact that at the south end of the building ships' engines are placed with their propeller shafts extending through the building wall into an outdoor tank so that the propellers operate against actual water inertia. In the center of the building a section is given over to the assembly and disassembly of the engines.

The Coast Guard School

The Coast Guard's Training school for petty officers at Groton, Conn., a permanent institution, contains two large buildings used for advanced trade training. The engineering building has on the ground floor large carpenter and machine shops and a large demonstration room in connection with the boiler plant. In this steam laboratory the students can study the operation of the oil-fired high pressure marine boiler and can attach to a steam header various marine engines and pumps for study in operation. Another room is given over to the study of internal combustion engines. On the second and third floors of this building are classrooms and administrative offices.

The academic building contains a first floor planned primarily as a radio communications school. One

A.C.—Air Compressor
B.W.—Bench Work
D.E.A.—Diesel Engine
Accessories
D.E.—Diesel Engine
Assembly

D.P.—Drill Presses
G.E.—Gas Engine Assembly
G.E.A.—Gas Engine
Accessories
L.—Lathes
O.—Office

P.T.—Propeller Tank
S.—Storage
S.M.W.—Sheet Metal Work
S.S.—Slop Sink Closet
T.—Toilet
W.S.—Wash Space

room is arranged to set up transmitters, another to install receivers, for study by actual use. The adjacent basic materials laboratory is for the purpose of breaking down sets and studying their mechanics and materials. On the second floor are a navigation school and various classrooms, lecture halls, shops and laboratories. In this building all study topics, or "schools," have been related to a group of rooms, basically a shop, a classroom and a stockroom.

The Merchant Marine Academy

At the Merchant Marine Academy, Great Neck, N. Y., recently opened, the buildings are grouped to form an academic quadrangle with a large drill hall extending beyond the major axis. Six intercommunicating dormitory buildings, or students' barracks, provide rooms which are now occupied by four men but which will accommodate two men comfortably after the war. A mess hall and galley building has facilities for feeding 2400 men.

However, it is the design and use of the three instruction buildings that are particularly interesting. They are known as the academic building; the engineering building,

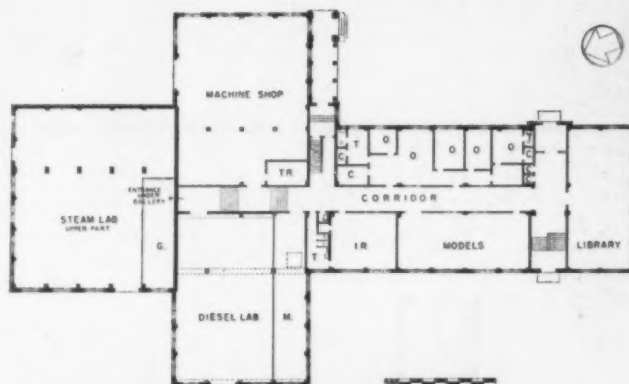
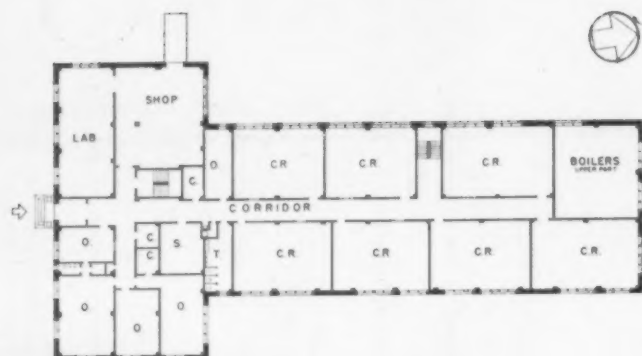
where most of the instruction for engineering officers is conducted, and the seamanship school, where deck officers receive their training.

In the engineering building the ground floor contains a huge room known as the steam laboratory where two marine boilers of the type found on Liberty ships are used both for providing heat and power to the buildings and for instruction purposes. A ship's engine has been set up, along with various items of auxiliary equipment, and thus a ship's boiler and engine rooms are simulated for training the potential engineering officers by actual operation of the equipment.

For Studying Diesel Engines

Another large room is used for instruction by demonstration of Diesel engines of various sorts. In this room an overhead crane makes possible the moving and rearrangement of the heavy equipment. A mezzanine along one side acts as a museum and observation platform and one part of the room is sealed off for clean work.

Opposite the Diesel laboratory is a large machine shop, 70 by 54 feet. It is outfitted with tables bearing



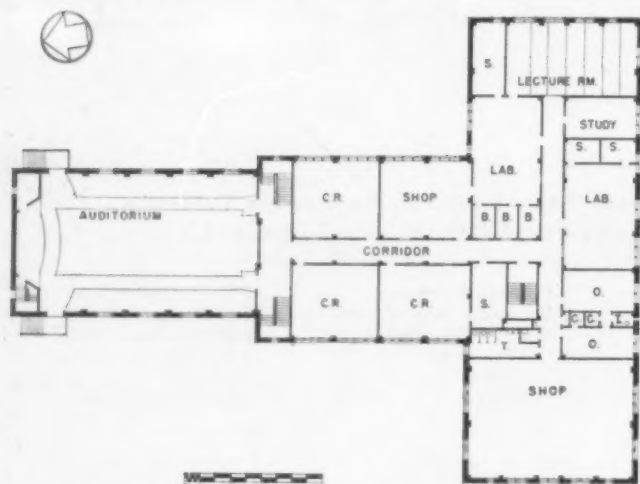
Left above—Second Floor Plan, Permanent Engineering Building, U. S. Coast Guard Training School located at Groton, Conn.

C.—Closet
C.R.—Classroom
T.—Toilet
O.—Office
S.—Storage

Right above—Second Floor Plan, Engineering Building, U. S. Merchant Marine Academy, Great Neck, L. I. Officers are trained here.

The upper parts of the two story steam laboratory and Diesel laboratory extend through this floor. The machine shop has been placed on an intermediate level.

C.—Closet
I.R.—Instruction Room
M.—Mezzanine
O.—Office
T.—Toilet
T.R.—Tool Room



Second Floor Plan—Academic Building
U. S. Coast Guard Training School, Groton, Conn.

B.—Insulated Booths
C.—Closet
C.R.—Classroom
O.—Office
S.—Stockroom
T.—Toilet

various types of machine tools, well spaced for their operation and with plenty of free work-bench space.

Space Well Arranged

The second floor of this building is given over largely to a well-lighted and comfortably outfitted library of technical volumes and to administrative offices. On the third floor there is an electrical laboratory with test benches wired so that various pieces of electrical equipment can be plugged in and studied. The remainder of the second and third floors is occupied by classrooms.

The typical room, 20 by 27 feet, serves a class of 25, allowing 20 square feet per man, although two rooms double this size are provided for a 50 man class. At the instructor's end of the room the blackboard runs between a locker on one side and enclosed book shelves on the other. Under the blackboard are

chart cases. The side wall opposite the windows has a blackboard with a chart strip above it while the rear walls of half of the rooms have covered blackboards and of the other half, tack boards.

The Seamanship School

In the seamanship school, which is appropriately near the water, the first floor consists of a number of large open spaces for instruction in the deck side of maritime operation.

On the second floor a semaphore room, 140 feet long, is used for practice in signaling by both semaphore and the use of keyboards and blinker lights. Additional signaling instruction is made possible under realistic conditions by a signal mast surrounded by a taff rail mounted on a setback roof.

In this building and in the academic building a great deal of additional space is used for classroom

instruction. However, it is the vocational aspects of the school that will be most significant in applying war lessons to peace planning. Emphasizing this, the school has built docks, boat sheds and a boat basin on the water front which make it possible to tie up training ships.

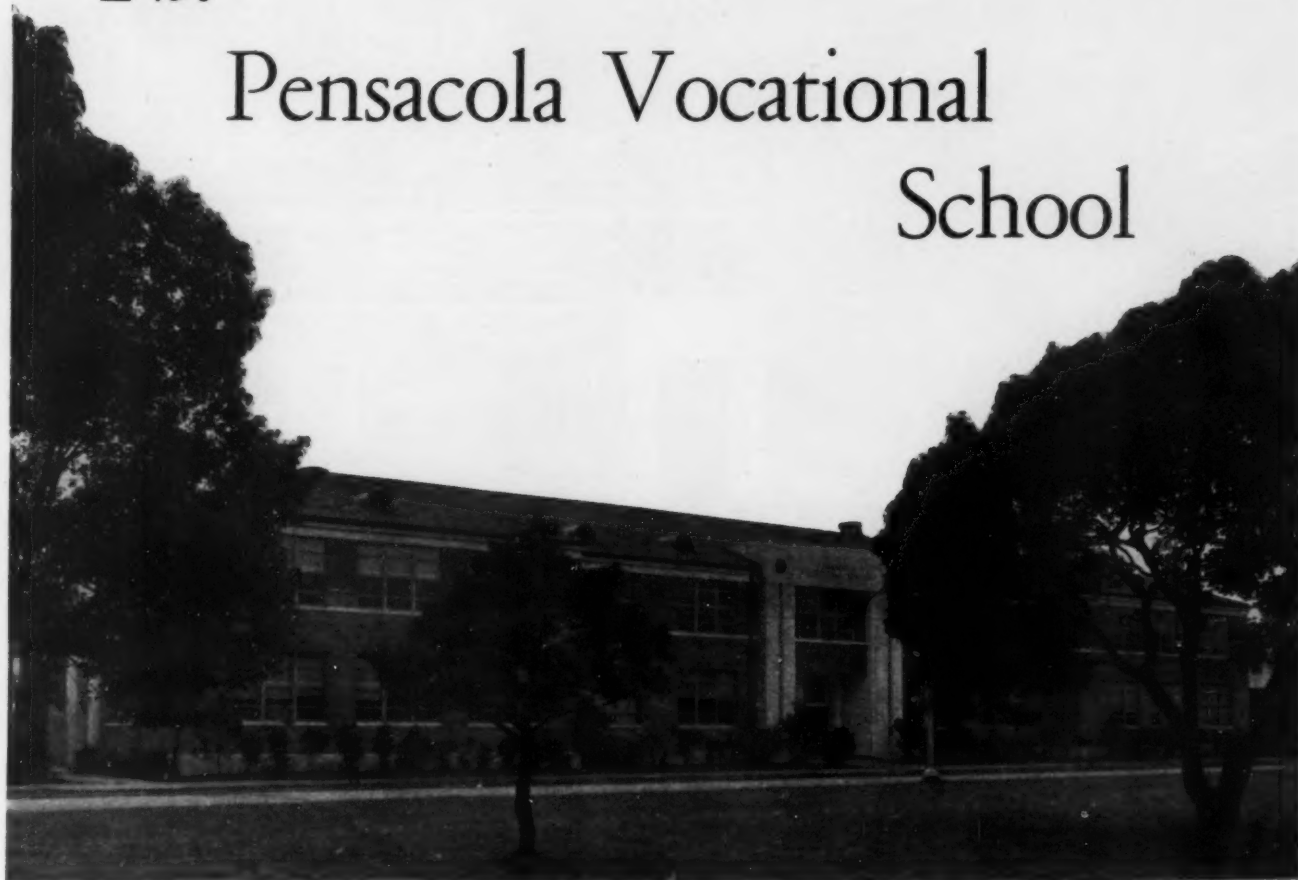
Thus step by step the cadets are led from classroom study into the actual practice of their vocation—through the shops, the training rooms with equipment set up to simulate ship conditions, the docks and training ships, to sea duty.

Rooms Planned Around a Trade

Every individual community school can profit in its planning for the future from this concept of vocational education. The planning of a room or a group of rooms around a trade providing for the gradual evolution of the training from classroom study, integrated with liberal arts work, to the point where actual work conditions are encountered is an approach that imaginative architects and progressive clients will work out together in many postwar schools.

The

Pensacola Vocational School



The Pensacola Vocational School is training men and women today to work in war industries. After the war, it will be maintained as a permanent part of the local school system.

R. DANIEL HART

Yonge and Hart, Architects and Engineers
Pensacola, Fla.

THE Pensacola Vocational School, Pensacola, Fla., was completed in the fall of 1941 as part of the program of vocational training for war production.

Built at an approximate cost of \$250,000, it was financed by the federal government as provided by Public Law 647 and is administered through the state department of education and the Escambia County board of public instruction.

The school plant consists of a two story classroom and laboratory building and a separate one story shop building. The former has a concrete frame, concrete floors and ceiling, walls of brick masonry with hollow

clay tile backing. The roof framing is of wood over concrete slab finished with asbestos shingles. All windows are of steel and are of the projected type.

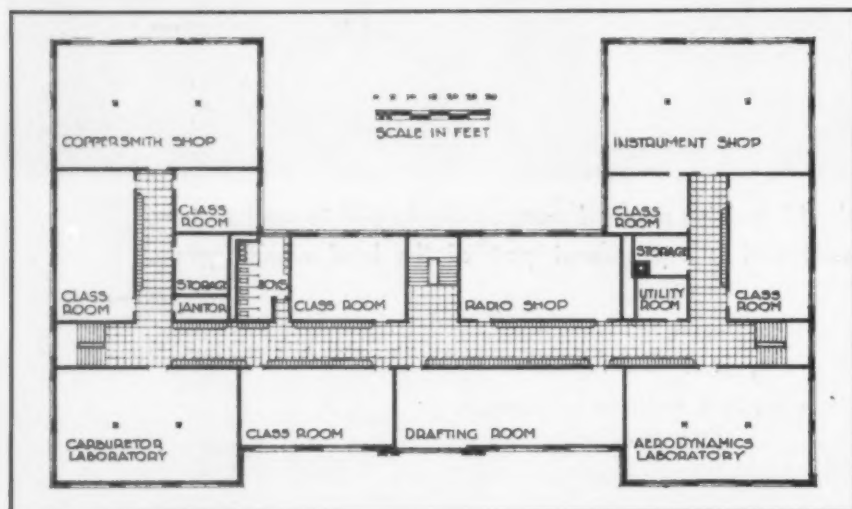
The one story shop building has a frame of steel columns and trusses, brick and tile curtain walls and large areas of glass. A continuous monitor provides additional light and ventilation.

More than 3000 men and women have been trained in this institution and are now employed in essential war industries. The Pensacola Vocational School is supplying aircraft maintenance workers for the assembly and repair shops of the Pensacola

Naval Air Station, arc welders for the Pensacola Shipyard and workers for war industries in near-by Panama City and Mobile.

A permanent institution, after the war the school will be maintained as a part of the local school system. It offers training to local people on a full-time basis preparatory to entering employment and, in addition to this, offers supplementary training for persons already employed who want to improve their ability on the job or work toward a better job.

Since it is a public school and financed from federal funds, the training is free. It offers interesting suggestions for postwar schools.



The first floor plan of the classroom building of the school appears on page 33 showing interesting design.

Above: A view of the rear courtyard.

Left: Plan of the well-arranged second floor of the classroom building.

Below, left: A general view of the shop; below, right: entrance detail.



A WORK-STUDY PLAN for High School Pupils *helps relieve labor shortage*

E. R. SIFERT

Principal, Proviso Township High School
Maywood, Ill.

HIGH SCHOOLS have long recognized the necessity and often the desirability of pupils' working part time during the school year. The war emergency has made the demand for such work acute. Accordingly Proviso Township High School, Maywood, Ill., has extended its program of cooperation with industry and has placed it on a more definite basis for the current school year.

Following a careful study of pupils who have worked in industry while attending high school, a work-study plan has been approved by the board of education. This plan serves as a basis upon which to build individual pupil schedules for the school year, with respect to both a definite number of hours in industry and a definite amount of work in school.

Industrial concerns interested in making such arrangements for the pupil employes were asked to contact the high school office. The response from personnel managers revealed an immediate and far-reaching interest on the part of practically all the large industrial concerns of the community. In fact, the demand for school assistance in building definite work-study programs prior to the beginning of school was overwhelming.

The Basic Plan Now in Use

Following is the work-study plan as first publicized. It should be borne in mind that school authorities and personnel directors believe the hours allowed for pupils' outside work in this program are probably too liberal. Yet these hours are in keeping with present day needs. Furthermore, most concerns have limited their work schedules for high school pupils to four hours a day instead of the possible maximum of six. Fol-

lowing is the statement approved by the board of education:

"Education is the foundation of democracy. With this in mind, the President, the chairman of the War Manpower Commission and all government officials urge our boys and girls to stay in school. The wages paid by war industries tempt many pupils to consider only the present but we must not lose sight of the future when the training represented by a high school diploma will again be a prerequisite to obtaining a good job.

"This war has definitely proved the value of a good formal education. Our national government recognizes this, as is evidenced by the fact that it has provided for and encouraged the further education of our enlisted personnel through correspondence courses given by the Armed Forces Institute and by strict adherence to educational requirements for all forms of specialized training.

Health Must Be Safeguarded

"Industry is experiencing a labor shortage and many boys and girls of high school age will be employed. It will be the policy of Proviso to cooperate with war industries to the limit and to arrange limited school programs wherever feasible. However, past experience has proved that pupils are often too ambitious and set for themselves a combined work-and-school program too heavy for the dictates of health and efficiency.

"Pupils cannot be expected to do school work unless their daily schedule allows sufficient time for sleep and study. Hence, a pupil who works more than fifteen hours during the school week from 6 p.m. Sunday to 'A' period Friday or any pupil who works more than five hours on a day or evening previous

to a school day will be required to bring in a statement from his employer showing the hours he is employed each day of the week.

"Pupils' programs will then be assigned in accordance with the following regulations, adopted after a thorough study of previous employment problems:

"1. When a pupil works not to exceed twenty-four hours between 6 p.m. Sunday and 'A' period on Friday, or more than six hours any one of these nights or later than 11 p.m., he shall be permitted to carry a full school program as long as his grades are satisfactory. He may be excused from study hall if his grades the previous semester were average or better.

"2. When a pupil works more than twenty-four hours, but not to exceed thirty-two hours, between 6 p.m. Sunday and 'A' period on Friday and does not work more than seven hours any one of these nights or later than 12 midnight, he shall be permitted to carry a program of three subjects and gym or two subjects, music and gym and attend school not more than four hours a day as long as the school work is carried satisfactorily.

Longer Work Period—Less Study

"3. When a pupil works thirty-three hours or more between 6 p.m. Sunday and 'A' period on Friday, his school program shall not exceed three hours daily and shall be limited to two subjects and gym or one subject, music and gym."

Following newspaper notices given the foregoing program, individual letters were sent during the early summer months to the personnel managers of all large concerns in the locality. The letter read as follows:

"We at Proviso realize that the labor situation may become more acute when school opens on August 31 and that industry will then face a serious problem. We are convinced that our first responsibility is to the boys and girls of our community. It is our duty in keeping with the war effort to hold pupils in school as long as possible. After a thorough study of the situation, we have set up a work-study plan which is explained in the enclosed news release and which we suggest you read before going further.

"You may be interested in what has already been done in this connection in one of our local plants.

"1. Department foremen canvassed all pupil workers to find out who would be interested in this work-study program, using the form supplied.

"2. Completed forms of interested pupils were turned over to high school authorities for checking.

"3. A representative of the high school went to the plant and consulted with each individual, mapping out his school-work program. The pupil was then given a sheet for his employer and his parent to sign.

Few Should Work the Limit

"Few pupils should work the limit of time set up in the work-study plan. For the average, we recommend the following:

"1. Where a pupil desires to carry a full school program, we recommend a work shift of not more than four hours daily, to terminate before 10 p.m.

"2. If a pupil is willing to carry a part-time school program of three subjects, we recommend a work shift of not more than six hours to terminate before 11 p.m.

"3. If a pupil wishes to work eight hours or more, he should not expect to carry more than one or two subjects in high school.

"We shall be glad to cooperate with you in a similar manner if you will act at once. For the benefit of the pupils concerned, as well as for the benefit of your industry, we suggest that you call Proviso Township High School immediately if you contemplate the use of student help during the coming school year.

"Very truly yours,

[Signed] E. R. SIFERT"

The reply to the foregoing letter resulted in numerous trips of school officials into factories for conferences with personnel managers and pupil employes. Hours of work were determined, school schedules were rearranged and nearly all cases were cared for prior to the opening of the school year.

Many pupils are now engaged in outside industrial work on a definite basis rather than on the previous hit-or-miss arrangement. It is felt that this plan will effect a marked improvement in caring for the educational needs of high school pupils and at the same time will contribute more effectively to the needs of industry in the war effort. It is working out satisfactorily at Proviso.

SPEED UP FOR WAR

HANSON H. ANDERSON

Principal, Arsenal Technical Schools
Indianapolis, Ind.

THE most important responsibility facing the high school principal in these war times is the adaptation of his curriculum to the pupil personnel so as to be of greatest aid to the war effort.

Those in charge of the war, with all its demands for men and materials, have not overlooked the potentialities inherent in the great body of high school boys and girls. These young people, in fact, make up the great reservoir of strength for carrying on the war itself and for solving the problems of coming generations.

School Must Provide Training

The high school administrator cannot escape this challenge. It is the business of the secondary school today not only to carry on its share of the speed-up program but also, in so doing, to judge and provide the kind of training needed by these teen-age people.

The armed forces need our 18 year old boys and even many of those who are now 17. Shops, factories and industries literally beg for commercially trained girls, wanting to take them even before their high school course is completed. Sacrifices on the part of pupils in the choice of subjects, as to both kind and quantity, are compulsory since emphasis is now on the war effort.

Boys upon graduation should have acquired at least some one skill, if they are not interested in going on to college. If further formal training is planned, it should be made possible for the brighter boys to enter college at an earlier age. The slogan for all should be: Get into work younger or go into college before 18.

In meeting this war-time need for preparation and acceleration, a guidance and counseling program is being carried on at the Arsenal Technical Schools of Indianapolis which have an enrollment of approximately 5600 pupils. Its objectives are:

1. To help boys and girls, through counseling, to become more conscious

of their responsibility to the nation.

2. To counsel with boys and girls concerning participation in the war activities for which these pupils have special interests and abilities.

3. To make it possible, through school adjustment, for superior pupils to develop their potential abilities as rapidly as consistent with age, health and social maturity.

4. To assist all pupils to attain a record of school achievement commensurate with their abilities, interests, personal and national needs.

5. To assist pupils to enter and become properly adjusted to situations involving war responsibilities.

To accomplish these aims, both the faculty and the student body have been made thoroughly conscious of the serious situation confronting young people. Teachers in charge of counseling, with pertinent data at hand, are asked to analyze all cases under their supervision. Through the director of guidance, bulletins and questionnaires are issued to homeroom teachers giving instructions and calling for certain kinds of information.

Pupils Interested in Speed-Up

Our experience proves definitely that most boys and girls are intensely interested in adapting the revised war courses and training to their abilities and needs. To our surprise many pupils, who had not been encouraged to take more work, are found to be thoroughly capable of carrying a more than normal load. This semester we have gone down as far as the second-term freshmen to learn what adaptations might be made to accelerate the schedule in the light of this year's experience.

Even one semester gained by a carefully planned program means an enormous increase in manpower at a time when the world needs such vital service. To illustrate concretely, the release of 600 boys into industry or training schools from our present graduating class would mean adding 54,000 working days or 432,000 clock hours of time to production in industry or to obtaining advanced training.

When Mothers Do War Work



Photo by Martha Homy
Broad Oaks School of Education, Whittier College

Animals that can be touched
are not feared by children.

"DAY CARE programs for school-age children while their mothers work? They'll never be successful!" some people were quick to tell us.

Others said, equally sincerely, "Day care may be all right in the preschool years, but these older children?"

"The schools will never be able to compete with what commercial amusements offer youngsters today," still others volunteered with dubious nods and smiles. "You'll have to be on your toes every minute."

In the meantime, more and more Holyoke mothers were going into war industries and children were being neglected. They were left, in some instances, to roam the streets, with no homes to go to and, excited by the sudden change and their new freedom, they created a situation fraught with dangers of gravest social concern.

Accordingly, in the face of dire need, much indifference and some opposition, the Holyoke public schools organized a school war-time facilities program for school-age children which was destined to receive state-wide recognition and acclaim.

It was a tremendous venture in that the program had to be sold to parents, children and the general public. The probability of its suc-

Schools in Holyoke, Mass., assume a new rôle in caring for children after hours

MARCELLA ROSE KELLY

Supervisor of School War-Time Facilities for School-Age Group
Principal of Hamilton Street School, Holyoke, Mass.

cess was further hampered by the seeming untimeliness of its opening, which took place the latter part of June just prior to vacation days ahead.

Undaunted the pioneers of the movement went forth explaining the program and emphasizing its advantages. War industries, labor unions, social service agencies, the newspapers, principals and teachers in the public schools, all cooperated in publicizing the program. Before long the community became "day care minded." Everyone—the humblest laborer, the business man, the professional person—soon came to know that a children's center was a safe and convenient place where adequate care and guidance were provided the child of school age while his mother worked.

During the first week five centers were organized in as many public school buildings throughout the city. Some 170 children were enrolled and paid the regulation fee of \$1.50 a

week. For this fee each child was privileged to participate in a program which, in its totality, considered:

1. *The physical needs of the child*—eating, washing, going to the toilet, resting and playing.
2. *The social needs of the child*—opportunity for each to participate in activities with other children of his own age and in a variety of settings.
3. *The ego needs of the child*—opportunity for each to do things on his own and to accept responsibility as far as he was able.

Each day's program, though elastic, was regularly planned and scheduled. It embraced a variety of activities and reflected to the fullest the use of community resources, such as the library, the museum, the playground, the swimming pool, the public parks and reservations, the movies, the radio, the local radio station and city-donated land for gardens.

The school bus was made available to each center for use once weekly.

On the scheduled day the bus would drive the youngsters to their victory gardens where a morning of hard work would be rewarded by a picnic lunch and an outdoor swim in the afternoon. Then there were creative and expressive arts which the children enjoyed especially on rainy days or when it was too warm to play outdoors.

It was this kind of program that kept 1602 children off Holyoke's streets during the summer months, an average of 160.2 children a week over a ten week period. The average attendance of 30.2 children at each center was the highest in the state. Visitors came from several sections of the country to observe the program in action. Contrary to public opinion previously entertained, it was a spectacular success.

The hours of the program at each center were so arranged as to meet the needs of the working mothers. Whenever and wherever an emergency existed, a 6:30 a.m. to 6:30 p.m. program was in operation. A copy of the program appears at the right.

HOLYOKE PUBLIC SCHOOLS

Holyoke, Mass.

School War-Time Facilities Program for the School-Age Child 6:30 a.m.—6:30 p.m.

- 6:30- 8:30—Rest (breakfast when necessary)
- 8:30- 9:00—Inspection (body hygiene) hands, face, lavatory
Conference (discussion of plans for the day)
- 9:00-10:15—Outdoor activities (varied from day to day to ensure cumulative interest and proper balance)
- 10:15-10:45—Midmorning lunch; rest period
- 10:45-11:15—Music, dramatics, creative arts
- 11:15-11:45—Story telling time
- 11:45-12:00—Rest; body hygiene
- 12:00- 1:00—Noonday meal at the center
- 1:00- 1:45—Relaxing time
- 1:45- 2:45—Crafts
- 2:45- 3:45—Free play, stories, singing, amateur shows
- 3:45- 4:15—Midafternoon lunch
- 4:15- 5:30—Outdoor activity
- 5:30- 6:30—Free time for individual interests

Children were kept at the centers only for those hours during which parental supervision was lacking in the home and parents were encouraged to call for their children as soon as their working day ceased. In this way parental responsibility in all matters of child care was continuously emphasized. Despite this precaution the average number of hours given to the care of each child in all centers was 8.44. Many parents worked outside the city limits and spent several hours in being transported to and from their homes. Without such a child care program in Holyoke, 1602 children would have been free to roam about unsupervised for nine hours each day.

Complete child accounting records were kept for each child. Each record showed the child's address, the occupational address of the parents, the number of hours each parent worked, the time at which each parent left the home and returned, the names of responsible persons who would take the child into their home in case of an emergency.

The centers offered excellent health facilities to those enrolled. Competent nurses examined all children once weekly; this was in addition to the inspection given them at the beginning of each day. Nurses made home visits when necessary and did follow-up work on special cases. Daily meals were well planned so that the children enjoyed healthful diets.

So successful was the summer effort in caring for children of working mothers that Holyoke is giving the same children extended day care in addition to the daily routine of the classroom this winter. The five centers originally organized to meet the needs of children during summer months are continuing in operation to care for children before and after school hours.

Now with larger numbers of fathers in military service and more mothers in war industry the child care problem becomes more crucial daily. The Census Bureau estimates that 6,000,000 women will be working before the close of 1943. Many of them are married women with children of school age. If America is to decrease the growing problem of instability among our children, other cities must move, as Holyoke did, into the area of child care for the school-age child.



Photo by Dick Farrell
Courtesy Brandoaks School of Education, Whittier College

Outdoor play builds sturdy bodies.

Roundup of LEGISLATION *for* 1943

PREVIOUS articles on educational legislation during the current year have been devoted largely to a single problem of such general interest that legislatures in many states were confronted with it. There have been many other matters also which were the subject of legislation, such as teachers' contracts, fiscal affairs, taxation, transportation and higher education, but space has not permitted treating them all. Here we shall attempt a general roundup of statutes covering different types of problems found in one or a few states and having no necessary relationship to each other.

Pupils' Problems

School Lunches. With the termination of the W.P.A. free school lunch program, some states enacted state-operated continuations of the program to meet local demands. Utah, for example, established a school lunch fund (to be derived from the receipts of the wine and liquor tax) under the jurisdiction of the state board of education. The fund was to be used by local boards to provide school lunches in accordance with the board's standards¹ and was to be apportioned to local districts in accordance with the number of lunches served.

Missouri school boards were authorized to provide cooks, foods and the like for school lunches and, in their discretion, to charge for the food.² Oklahoma, on the other hand, merely authorized acceptance of federal funds for the purpose.³

Health Examinations. New Mexico made it the duty of county superintendents and individual teachers to see to it that all children under

HARRY N. ROSENFELD

Principal Attorney, Federal Security Agency

8 years are immunized against diphtheria. It was also made illegal for any child to attend school without such immunization and for any teacher to permit any such child to attend school. It is a penal offense, punishable by fine and imprisonment, to refuse to allow immunization; however, when a doctor certifies that immunization "would seriously endanger the life or health of such child," there is a renewable exemption for six months. The costs are to be borne by the parents, except that when the parents cannot afford it, the county or the local board of education will meet the expenses.⁴ New Mexico also enacted a prohibition against the employment of any teacher afflicted with communicable tuberculosis or syphilis.⁵

Connecticut now requires all boards of education in towns of more than 10,000 to appoint a school medical officer and provide adequate facilities for the examination of its pupils. All pupils are to have a health examination at least once every three years, the results of which are to be incorporated into the cumulative health cards. All medical data are to be kept confidential. The law permits exemptions from such required examinations on religious grounds.⁶

Massachusetts expanded the scope of its physical examination to include an annual examination by the school doctor "to ascertain defects of the feet which might unfavorably influence the child's health or physical efficiency, or both, during childhood,

adolescence and adult years."⁷ And California made some general amendments to its provisions for the supervision of the health of pupils.⁸ Many states, in addition, adopted legislation to care for crippled, physically handicapped and blind children.

Problems of Administration

Surveys. A number of states passed legislation on the matter of school surveys of one kind or another. Ohio established a school survey commission to study its school laws, composed of 11 members, four from the senate, four from the house and three chosen by the governor.⁹ A commission of 15 in Illinois, equally divided among senate, house and gubernatorial appointees, is directed to survey higher educational facilities and report by March 1, 1945.¹⁰ Alabama's educational survey commission consists of seven members appointed by the governor; it is required to report by March 1, 1945, on the public school system, including higher education.¹¹

South Dakota's governor was authorized to appoint a committee to study the advisability of compulsory high school education and of the revision and extension of the high school curriculum to provide a greater emphasis on vocational education. The report is to be submitted by the end of 1944.¹² New York's joint legislative committee to investigate the educational system was again continued.¹³

Private Schools. The operation of private schools appeared in a few

¹Utah, H.B. 164.

²Mo., Ch. 103, Sec. 23.

³Okla., p. 198, Sec. 1.

⁴N. M., Ch. 50.

⁵N. M., Ch. 33.

⁶Conn., Ch. 194.

⁷Mass., Ch. 384.

⁸Calif., Ch. 883.

⁹Ohio, H.B. 218.

¹⁰Ill., S.B. 294.

¹¹Ala., Gov. No. 372.

¹²S. D., Ch. 66.

¹³N. Y., A.B. 24.

WRITE FOR YOUR VOLUME INDEX

If you bind your volumes of *The NATION'S SCHOOLS* you will want the index to Volume 32, covering issues from July through December 1943. War-time paper rationing prevents its publication in the magazine. Send requests to 919 N. Michigan, Chicago 11, Ill.

states to present a problem of sufficient importance to warrant regulatory legislation. North Dakota, for example, requires a license from the commissioner of the board of higher education before a private trade school or correspondence school, *within or without* the state, may operate. The license is granted only upon approval of the following aspects of the school's operation: advertising, standards and methods of instruction, equipment and housing, qualifications of teachers, student enrollment contract and sufficiency of resources. Solicitors of business for such schools also are required to obtain permits.¹⁴

Illinois allows a monetary recovery to any student of a correspondence or trade school who is defrauded by misrepresentations on the part of the school or its circulars.¹⁵ California requires an annual license for the operation of any private "defense training school"; the license may be denied where there is inadequate instruction or equipment or because of the lack of "personal integrity and moral responsibility" of the applicant.¹⁶

War-Time Problems

Foreign Language Schools. By an enactment obviously aimed primarily at the Japanese, California now forbids any classes or schools for the teaching of foreign languages without a license from the state board of education.

No license will be granted when (1) the school is not open to minors or American citizens and (2) when the instruction given or the manner

in which it is given creates or tends to create disloyalty to the government of the United States or of the state of California, or creates or tends to create loyalty to any foreign government or ruler, or when it "tends to subvert the loyalty of any pupil, citizen of the United States" to the government of the United States or of the state or when the courses or schools are conducted in a fraudulent manner. Licensed schools are subject to occasional visitation by the state board.

The act is made inapplicable to public schools, colleges or universities or collegiate institutions in existence on Jan. 1, 1943, or to schools now or hereafter maintained "by a religious denomination or sect well established as such."¹⁷

School Plant and Equipment. For the duration, Minnesota's school boards are authorized to lend or rent their equipment and to furnish an operator to persons engaged in victory gardening.¹⁸ California passed an act providing a method for leasing school lands for the extraction of gas from under such property, with the proviso that no wells be drilled on such leased school lands. This was necessary because otherwise the gas would be extracted without financial return to the school district.¹⁹ West Virginia directed that for the duration there were to be no changes in school textbooks.²⁰

Vocational Rehabilitation. Characteristic of what is likely to occur with greater frequency in forthcom-

ing legislative sessions, Connecticut²¹ and California²² addressed themselves to the vocational rehabilitation powers of their state boards of education. With Congressional enactment of the Barden-LaFollette Vocational Rehabilitation Act²³ broadening the federal civilian vocational rehabilitation program, state legislatures may revise their rehabilitation laws.

Postwar Planning. Perhaps indicative of what many states are doing in a less formal manner is Wisconsin's statute setting up a legislative interim committee on postwar planning, the functions of which include the making of preliminary plans and surveys for a long-range program of public works projects including universities and other educational institutions.²⁴

How Legislatures Serve Schools

Legislative action on salaries, pensions and other similar compensatory features is of great importance to the teaching profession. However, the rôle of the legislature in the educational sphere is much broader. In the final analysis, it is the source of all school authority, not only in terms of the actual delineation of powers and duties of school boards but also in the very terms of financial support, either state-wise or local.

Furthermore, the legislative session presents still another aspect of great importance, that of public relations. It is an opportunity for educational leaders to educate the public as a whole and the community leaders in particular to the growth and needs of the school system. Needless to say, the legislature is not the sole element in the school's structure; courts, attorneys general and administrative practice also are important aspects of the total pattern.

Still, in many respects, the legislature is the living pulse of a growing school system. Therefore, it behooves those interested in education and in the development of the school system, whether from a practical or a theoretical point of view, to pay close heed to legislative matters and learn how they can most effectively enter the arena as successful participants.

¹⁷Calif., Ch. 921.

¹⁸Minn., Ch. 485.

¹⁹Calif., Ch. 787.

²⁰W. Va., Ch. 45.

²¹Conn., Ch. 68.

²²Calif., Ch. 162.

²³Public Law 113, 78th Cong., 1st Sess., 57 Stat. 374.

²⁴Wis., Ch. 417.

¹⁴N. D., H.B. 236.

¹⁵Ill., S.B. 598.

¹⁶Calif., Ch. 574.

FIRE DANGERS *in* Winter Heating

NOT long ago the War Production Board called upon schools and colleges to give greater attention to fire control, pointing out that present material shortages allow for replacement of only "bare essentials" destroyed by fire. Careful and thorough inspection of buildings was urged upon school administrators.

Although not mentioned in the W.P.B. statement, another factor to be stressed at this time, when it is necessary to employ inexperienced personnel, is the training of new workers to recognize and report hazardous conditions.

Proper operation of heating equipment and attention to hazards associated with heating are particularly important. A detailed study made by the National Fire Protection Association into the causes of 1000 school fires lists "steam pipes that ignited woodwork" as one of 18 known causes.

Most Frequent Causes of Fire

Other causes closely related to winter heating are "defective or overheated heating equipment," "defective or overheated flue or chimney," "sparks on wooden shingle roofs," "sparks from fireplace or stove" and "defective oil burner." Certain other causes, such as "rubbish and litter" and "ignition of flammable liquids and gases," have a direct bearing on the hazards of open flames and excessive heat.

Steam pipes in prolonged contact with exposed woodwork can char and eventually ignite the wood; hence, any pipe that is too hot for a person to rest his hand against comfortably—more than 90° F. above normal room temperature—should be separated from combustible material by adequate air space or insulating material.

Heating and ventilating ducts are another common source of danger.

DELBERT JOHNSON

Safety Research Institute, Inc.

These systems are used to provide continuous circulation of air at a given temperature. An arrangement by which the ducts discharge into an open attic is a serious defect, as fires have frequently gained headway in the attic space before being discovered, destroying the attic and roof. Also, embers often drop down ducts and start fires in other rooms.

In some instances, the hazards of inaccessible open spaces are not confined to attic or roof areas but are created by having vertical shafts or ducts discharge into or pass through open spaces created by means of false ceilings or floors. Another danger arises in ventilating ducts constructed of wood. The wooden ducts, thoroughly dried by hot air, carry fire through inaccessible walls and wall spaces making control practically impossible.

Wooden shingle roofs, often dry and moss-covered, are hazards, particularly if wood or soft coal is burned. Such roofs should be replaced with fire-resistive coverings. In the meantime, spark arresters erected over chimneys will lessen this danger.

Most Fires Start in Furnace Rooms

More school fires can be traced to the boiler or furnace room, according to the National Fire Protection Association, than to any other single cause. It is of first importance that the heating plant and fuel supply rooms be cut off from the main corridors by fire-resistant walls, ceilings and doors. Periodic inspections should be made to discover any defects in the furnace or boiler, or in the flues or chimneys. These should be corrected immediately. Chimneys and flues should be kept clean and

all cracks should be repaired early.

If the heating plant has recently been converted from oil to coal, exceptional care must be taken to avoid overheating and coal gas formation. Overheating usually is due to improper draft regulation. Even if there are thermostatic controls, the operator should be familiar with the principles involved. Coal gas formation often follows improper banking.

Good Housekeeping Important

Next, attention should be paid to good housekeeping. Embers and ashes should be stored in metal receptacles. Accumulations of waste-paper, rubbish, old furniture and stage scenery should be removed from the basement and all combustible materials should be kept at a safe distance from the furnace and other heat sources. Coal should be laid down in clean bins, separate from wood, rubbish and other foreign materials, and should not be stored where surrounding air temperatures exceed 75° or 80° F. The first coal laid down should be the first used, and piles should be inspected regularly for evidences of heating. If oil is used, a remote control should be provided whereby the oil supply line can be shut off in an emergency. Likewise, gas supply lines should have outside shut-off valves.

In some instances when fuel supplies are inadequate, there may be a temptation to press portable heaters into service. Such heaters, whether they be electric, gas, kerosene or charcoal, should be subject to adult supervision at all times.

Some of these fire dangers are related to structural defects and others to faulty supervision and maintenance. In both categories are problems that are difficult to solve under war conditions. In many cases a structural hazard will be recognized,

but extensive alterations may be prohibited by existing priority restrictions. Likewise, the school official may realize that some of his maintenance men are too "green" but skilled help is hard to find.

This combination of circumstances shifts the burden of fire safety increasingly in the direction of fire protection. If extensive repairs or reconstruction must be postponed and if the school must get along as best it can with present personnel, the least that can be done is to make adequate preparations for emergencies.

The first step in this direction is to perfect the school fire drill, for protection of life is of paramount importance. Furthermore, if a fire does break out, the quick evacuation of children and teachers will enable maintenance personnel, buttressed perhaps by predesignated teachers, to devote all its attention to the fire.

Turn in Alarm Immediately

If a fire, when discovered, is already in an advanced stage, there is little that the school personnel can do about it except turn in an alarm to the fire department (which is the first order of business no matter how large or small the fire is) and see that the building is cleared of people. However, if the fire is still in its early stages, a quick-thinking person armed with the right equipment ordinarily can bring it under control and end the danger right there. The best device for fighting an incipient fire, according to the National Fire Protection Association, is a standard approved fire extinguisher.

Every floor of the school should have extinguishers so placed that a person will not have to travel more than 100 feet to reach the nearest one. In extra-hazardous areas, such as woodworking departments, paint rooms and the furnace room, this distance should be reduced to 50 feet with at least one unit of protection for every 2500 square feet of floor area. (Definitions of a "unit" and standards for the selection and distribution of extinguishers are contained in the pamphlet "First Aid Fire Appliances," published by the National Board of Fire Underwriters, 85 John Street, New York.)

However, since all standard extinguishers are today subject to priority regulation, particular attention should be paid to the upkeep of ex-

isting equipment. Extinguishers should be checked at frequent intervals to see that the nozzle is clear, that the hose is in good condition and that the shell shows no signs of tampering. Certain types of extinguishers should be recharged, at least once a year. Only recharge materials supplied by the manufacturer should be used; if the extinguisher needs repair, it should be returned to the manufacturer for proper servicing.

War-Time Extinguishers Available

If new or additional extinguishers are needed, it may be possible to obtain what are known as "EAS" models. These models are being made by manufacturers of standard extinguishers under Emergency Alternate Specifications approved by Underwriters' Laboratories. The qualifying "EAS" designation on the Underwriters' approval label indicates that these extinguishers have passed standard performance tests but, because they are made of substitute materials, they cannot be expected to resist corrosion or stand up as long as standard equipment. The heavier fire fighting equipment,

such as automatic sprinklers and standpipe hose, should be given the same careful attention as extinguishers.

Fire-Fighting Routine Valuable

At the sound of the school fire alarm (and this signal should be given at the first suspicion of fire), maintenance help should marshal first-aid equipment to the scene of the fire and be prepared to use standpipe hose, if necessary. Other members of the school staff may be assigned to help out. This kind of routine, industrial experience proves, can result in the almost immediate control of from 70 to 90 per cent of all fires.

The organization and training of a fire brigade will have to depend upon local conditions but should not be neglected, particularly during the winter months when hazards are more numerous than at other times. According to the U. S. Office of Education, more than \$1,000,000 worth of schools are destroyed by fire every month. Increased emphasis on all aspects of fire safety is the only sure way to reduce this figure.

BETTER PLANT PRACTICES

Meets Union's Proposal

Recent discussions in these columns on the unionization of school custodians has revealed a situation in Evanston, Ill., in which a satisfactory solution was worked out in conference. Certain demands were made upon the school board by a C.I.O. union of janitors. Following was the union's proposal:

"Hours: Forty-eight hour work week during school sessions. Forty hour work week during all vacation periods, that is, during summer, spring and Christmas vacation periods. Time and one half for all work in excess of forty-eight and forty hours, respectively.

"Wages: Minimum rate for second grade men of \$150 per month, that is, all men receiving less than \$150 to be raised to \$150. All men receiving \$150 or less to receive an increase of 20 per cent of \$150. Base rate for all first grade men of \$170 per month. All men tending a building alone to be graded as first grade men. All men between \$150 and \$170 to be raised to \$170, plus 20 per cent.

"After Hours: Minimum of \$2 to be paid for the opening of the school building for any purpose whatever, with \$1 per hour over two hours.

"Sick Leave: Pay for fifteen days' sick leave. Sick leave to be accumulated from year to year.

"Vacations: Fifteen days' vacation with pay, only working days to be counted in fifteen day calculation.

"Funeral Absence: Three days' leave in case of funeral in immediate family.

"Seniority: In case of necessary lay-off, the youngest man in period of service shall be the first laid off rehiring to be in reverse order.

"Compensation for Injustices: In case of discharge, any man discharged or laid off without proper cause, to be reinstated and paid for all time lost.

"Watchman: Minimum pay of \$150 per month with 20 per cent increase for those over \$150.

"Pay Period: Twice per month."

Representatives of the three school boards met immediately, first without the union members and later with them when the foregoing schedule was presented. It immediately became ap-

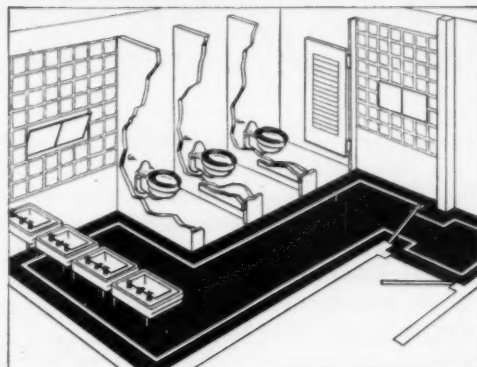


BOYS and girls of school age are no respecters of equipment. Yet it is essential to their health that the plumbing equipment in schools be kept in service. Oftentimes a small repair now will save costly replacements later.

Where replacements are necessary, Crane has developed a line of fixtures designed to use a minimum of vital materials—lavatories, urinals and closets of china, for example, with fittings of cast iron.

Your plumbing contractor will check your plumbing equipment, make the necessary repairs, or give you further information on replacement—why not consult him?

PLAN NOW FOR YOUR SCHOOL OF TOMORROW



If you are planning a new school or major alterations in your present building after the war, be sure to give careful consideration to the plumbing. Crane designers are now at work on the plumbing line of tomorrow and your Crane Branch will gladly assist your school board or architect in planning the washrooms or heating.

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parent that the union representatives had not expressed their meaning clearly and that their proposals were presented as a basis for negotiations rather than to win 100 per cent approval.

Representatives of the school districts held several conferences to consider these proposals. The high school, having only one instead of several buildings, had a somewhat different problem than the two elementary school districts. Consequently, the high school representatives elected to deal separately with the union.

After discussion it was agreed to

grant substantially what the men requested as to hours and overtime but to modify their requests as to sick leave, vacations, funeral absence and compensation for injustices. It was deemed impossible to grant their request for seniority or for pay periods twice a month.

On the matter of salaries it was felt that there were more grades of ability than had been recognized by the men. So a salary schedule was worked out covering five grades of positions and allowing \$5 per month advances for the first four years that a man occupies

any one position. The salary that was attached to the top position (\$200 maximum for a man supervising two or more others) was practically the same as the amount requested by the men (\$204, i.e. \$170 plus 20 per cent). Likewise, class 2 salary maximum of \$190 for a man working alone or with one helper was a little higher than their second grade salary of \$180 (\$150 plus 20 per cent). But a class 3 salary was also established for helpers; a class 4 salary, for men over age, handicapped, working part time or with unusual duties, and a class 5 salary, for apprentices. So that the apprentice arrangement would not be abused, it was stated that a man could be kept at that grade for six months only.

Overtime is to be paid at a straight rate of \$1 per hour, with a minimum of \$2 for opening the building in the evening or on holidays. Ten days' sick leave accumulative to thirty days was granted and two calendar weeks' vacation with pay. No limit was put on funeral absence but it is deducted from sick leave.

Men to Do Any Type of Work

The board representatives wanted the men to recognize that they should do any type of work that might be required. Inasmuch as the union is a vertical or industrial type of union instead of a craft or horizontal type, there was no difficulty on this matter. The board members were assured that the men would continue to do the variety of jobs that they had done before. The seniority provision was eliminated and the "injustice" provision amended to indicate that the board had final decision on what is proper cause.

Nothing had been said about signing a contract with the union and the board of representatives had differed somewhat among themselves on this subject. At the final conference with the union this problem was solved because the union representative stated that the union did not expect a signed contract. The board adopted, therefore, the terms and conditions agreed upon as part of its rules and regulations.

Because it was not possible to put the new salary schedule into effect immediately, it was agreed this year to give each man one half the increase that is called for by the schedule with the promise that he would be given the full amount next year. This involved a gross increase of about 5 per cent in one district and 12 per cent in the other for the current year.

It is not claimed that this situation is representative of other districts or that the right solution to the problem was reached. For the time being, however, everyone seems satisfied.



FOR winter weather with its snow, sleet and wet shoes, you need a wax on your floors that is weatherproof. Moreover, you need a wax that is tough enough to withstand the constant moppings required to keep your floors clean.

Two waxes that meet all demands of winter weather are Neo-Shine and Weatherall.

Weatherall, unlike ordinary quick-drying waxes, shows no white spots from the dripping of water. Neither does it wear off the surface when it is mopped. For this reason Weatherall is especially useful for treating the lower floors or entrances of buildings where water and snow are tracked in.

Neo-Shine also is high in water repellent action. Its unusually high wax content makes it go further—last longer. It

is the perfect wax for winter or summer.

Try these longer-wearing wax finishes on your school floors—now. You won't find their equals for water-resistance, coverage or economy—at any price.

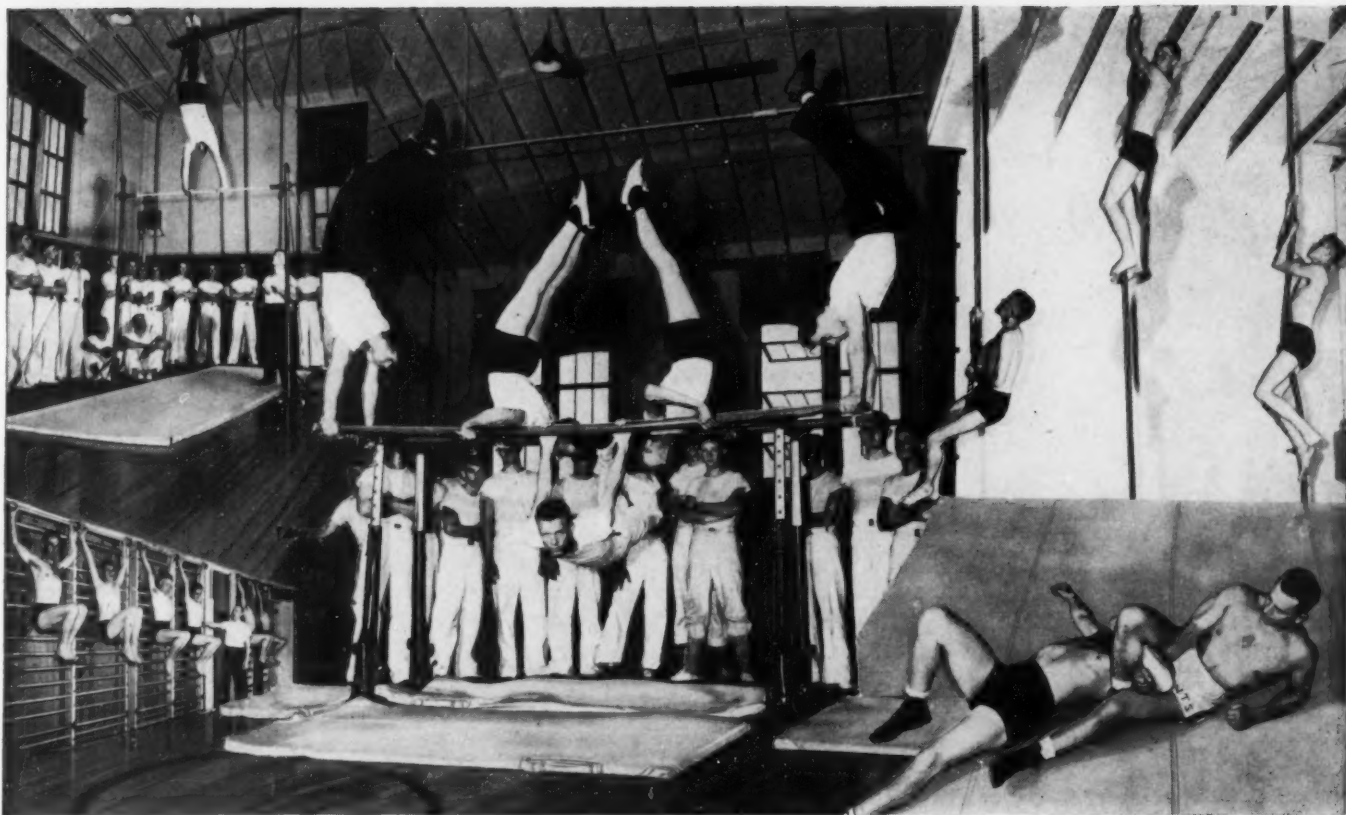


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an All-out Physical Fitness Program **NOW!**

with gym equipment by Medart

Medart is ready with Physical Fitness equipment that will bring your gymnasium up to date and enable your school to go all out in cooperation with the Victory Corps program! Medart products are made to the same quality standards as always . . . which means Medart equipment will stand up under punishment . . . the kind of continuous punishment it's going to get these days! Check the list of available equipment along-side . . . then, check your needs.



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★ The War Production Board's amendment to Order Number M-126 specifically approves certain iron and steel gym equipment for use in the programs outlined in the bulletins, "Physical Fitness Through Physical Education for the Victory Corps and Physical Fitness for Students in Colleges and Universities."



FREE BOOK FOR INSTRUCTORS
Physical Training, Practical suggestions for the instructor by Charles E. Miller, B. Sc., A. M. Gym. Coach University of Nebraska. 72-page book explaining correct uses of gym equipment.

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- Mats and Covers

THE SCHOOL CAFETERIA

CONDUCTED BY MARY DeGARMO BRYAN

Equipment of Today and Tomorrow

MARY deGARMO BRYAN

Head, Institution Management
Teachers College, Columbia University

THE physical function of the school lunchroom is to provide for the preparation and service of food.

Equipment should be selected to carry out this function efficiently and effectively in each specific situation; it will vary, therefore, according to the type of lunch, numbers served and length and scheduling of the lunch period.

In times of emergency, amazing things can be accomplished in the preparation and service of food with little equipment or with equipment of materials and workmanship that would not ordinarily be desirable.

We now find ourselves in such a time. It is impossible to obtain certain pieces of equipment; many are limited in quantity and design; others are made of makeshift materials. We shall have to get along as best we can, using what we can purchase and borrowing from the community such essential items as are not otherwise available.

Standards Must Be Upheld

The foregoing advice does not mean that we must lower our standards of food and of cleanliness. Instead we should use greater effort, more ingenuity and observe careful maintenance and repairs. Temporary expediences in equipment should not be accepted as permanent standards; rather should we hold to minimum desirable practices and look forward to the postwar period with its surplus of stainless and new materials and its improved construction.

The lunch must be prepared and served under conditions of cleanliness and good sanitation in order to safeguard health. Both kitchen and lunchroom, if these are separate rooms, should be light, well ventilated and easily cleaned.

Outside light is usually possible in

small schools. It should be supplemented by good artificial light over work spaces for use on dark days and in the evenings. Light intensity on work tables and range should be from 20 to 30 foot-candles. Good light is essential if food is to be clean and if workers are to avoid accidents.

Cross-ventilation may usually be provided if thought is given to the location of the lunchroom. In a small school this natural ventilation may be all that is required. If more cooling is required, as for a larger lunchroom, it will be necessary to place a metal hood over the cooking unit and to connect this to an exhaust fan.

Some Factors in Ventilation

The exhaust fan may be placed on the roof in connection with the flue or, less satisfactorily, in a kitchen window. The duct from the hood to the window should not be lower at the window than at the hood; it should not be wider at any point than at the hood.

Ventilation and lighting of storerooms and closets are improved by using wire instead of wall partitions.

Since the type of lunch to be served determines the equipment needed, let us assume that a simple meal built around a main dish is replacing the more varied selection of the older type of cafeteria service. In this lunch the main dish is likely to be some hot dish for the greater part of the year, so the center of the kitchen, and the one indispensable item, is the range.

The stove may be the simplest type of household range, using whatever fuel is available. Such a cooking unit is better than none and may be used either as an emergency item or until it is worn out. However, since food will probably be served as long as the building stands, a

more suitable type of cooking unit can be selected when available.

What Type of Range?

Since the range is to be used for many years it should be of the sturdy, heavy-duty type. It should have a solid top, if possible, a smooth front, concealed hinges and fuel supply. If the type of fuel permits, the oven should be thermostatically controlled.

For a small lunchroom one section of range, containing one oven, is adequate, but if more than 150 to 200 cooked lunches are to be served two sections with an oven in each will prove a convenience. If space permits, a skeleton range top with a one or two deck bake oven alongside forms a more convenient working unit.

Two pieces of mechanical equipment are well worth their cost: a small vegetable peeler of not more than 8 pounds' capacity and a small mixer, approximately 8 quarts. The peeler is a labor saver and reduces preparation waste; it should be set on a high stand so that it empties into the sink. The mixer can be used for mashing potatoes—that favorite vegetable of all school children—for making sauces and for whipping up simple cookies and cakes.

A small slicer will be found to be of wide usefulness, if funds are available for its purchase.

A sink is necessary for the preparation of vegetables and fruits, for supplying water for cooking and for washing pots and pans. It should be of stainless metal if possible, since it should last for many years. Galvanized sinks are satisfactory for some years in locations in which the water is relatively soft. Even a porcelain sink can be used in a very small lunchroom.

The sink should have two com-

WINNING PIE-BAKING HONORS



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● Mince Meat from our own Sunshine Kitchens . . luscious cherries from the wide variety of Sexton carefully selected frozen fruits . . pies that would cause Grandpa in Maine to smack his lips with gusto at breakfast, dinner or supper! Edelweiss mince meat, made in the spring, aged for delicious Thanksgiving pies, a contest winner for years. Sexton's prominent position in the field of frozen foods offers you the advantage of a superb service.



GOOD FOOD FOR
PLEASED GUESTS





"...shall not perish from the earth."

In the silent throng at Gettysburg it seemed that he had just begun to speak when the tall, careworn figure turned back to his seat among the nation's nobles. And his voice—it hadn't carried to the trunks of the crowd. What was it that he said? What was that solemn sentence?

"This nation shall not perish from the earth."

That was what he said. That was Lincoln's promise to the future. That was the sacred promise that today is in our hands—yours and mine.

Americans meet this responsibility in strangely different ways. In a luncheon. In a gunner's turret. At a lathe. In a school room. In a kitchen. In a hospital ward. With a band. With harder, longer work. With sacrifice and saving. With tears on a pillow at night.

But we meet it! That is the important thing. We meet the responsibility and make good the promise that Lincoln made at Gettysburg.

America and freedom... shall not perish from the earth.

FOR YOUR BULLETIN BOARDS

... with our compliments

In September of this year, we published in several magazines an advertisement that soon became famous. Apparently many Americans were inspired by this sincere tribute to a great nation and a great American.

Now this advertisement—with all commercial text removed—has been made into posters (22" by

30") that are offered free of charge to school executives for posting on school bulletin boards.

You are invited to mail the coupon for as many copies of the "Lincoln" message as you can use. We offer them in the hope that they will aid a little in your most important work of building a new generation of strong, patriotic citizens.



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Gentlemen: Please mail me _____ copies * of your "Lincoln" poster, for display on the bulletin boards of our school.

Name _____

School _____

City _____ State _____

*In order to conserve paper we request that you limit your order to the exact quantity required for available display space.

partments and two drainboards. It should not be more than 10 to 12 inches deep and the corners should be rounded. If galvanized, the sheet steel should be welded complete in one piece, then galvanized. At present, only galvanized and porcelain sinks are available and new galvanized sinks must have wooden drainboards.

If two sinks can be provided, one for pots and one for vegetables, the vegetable sink should be approximately 8 inches deep and may contain only one compartment and two drainboards.

One or more work tables will be needed. Stainless metal tops are preferable but a wood top of poplar or of maple strips will last indefinitely.

Pressed wood tops are satisfactory for serving tables. Wood requires special care in cleaning. If the table is mounted on swivel casters, it can be moved to any desired location. The cook's table can even be rolled into position for a service counter if space is limited. Only wooden top tables can be purchased now.

Refrigeration is necessary in most climates in order to store perishable foods. Storage at low temperatures prevents spoilage and waste and aids retention of the vitamin content of the foods. Mechanical refrigerators are to be preferred to ice cabinets but are not being manufactured at present. Ice cabinets with limited amounts of steel and of limited capacity are still available. The size

required is determined on the basis of the kind and amounts of foods to be stored.

Shelves for storage of supplies are most easily cleaned and kept free from vermin if made of metal. Enameled steel shelving is commonly selected; wood shelving is now the only type that can be purchased.

Metal cans are satisfactory containers for dry groceries in bulk; pressed wood containers are now substituted.

A dishwashing machine is highly desirable from the standpoint of sanitation. Dishes are easily pasteurized, if scraped well, washed at a temperature of from 130° to 140° F. and rinsed at approximately 190° F. A single basket model is adequate for a small lunchroom. Such machines are difficult to obtain at this time. Dishes can also be washed in pans or in a stoppered sink.

Small Kitchen Equipment for Lunchroom Serving 150 or 200 Meals

ARTICLE	QUANTITY	DESCRIPTION
Stock pots, kettles	1 or 2	5 gal. (Four gallons of soup in a pot of this size will serve 80 six ounce portions or 64 eight ounce portions)
Double boilers	2	4 to 6 qt.
Colander	1	10 qt.
Food chopper (unless mixer attachment)	1	
Skillets	1 or 2	12 in.
Coffee makers	2	8 cup
Scales	1	Household, 25 lb.
Chopping bowl and knife	1	Polished wood, paraffin finish, diameter, 13 in.
Baking pans (must fit oven)	4 to 6	Aluminum, 18 by 12 in.
Cake pans	2	Aluminum, 8 by 12 in.
Cookie sheets	2	Aluminum, approx. 10 by 14 in.
Pitchers	2	Enamel, 3 qt., hollow handle
Saucepans	2	4 qt. and 6 qt.
Mixing bowls	2	Aluminum, 5 qt.
Measures	6	1 gal. (1); 1 qt. (1); 1 cup (4)
Measuring spoons	2 sets	
Strainer	1	1 qt., wire mesh
Grater	1	Four sides
Egg beaters	2	Dover (1); wire whip (1)
Forks	8	Kitchen forks (6); long handle, 18 in. (2)
Spoons	8	Wood mixing (2); large metal mixing or serving (4); slotted aluminum (2)
Spatulas	2	Square blade (1); rectangular blade (1)
Knives	10	Slicing (2); butcher (2); paring (6)
Salt shaker	1	Large
Bottle opener	1	
Can opener	1	Hand or hotel
Reamers	2	Glass or aluminum
Flour sifter	1	2 qt.
Bread board	1	Maple
Rolling pin with canvas cover	1	Maple
Muffin tins	4	9 or 12 per pan
Scoops or dippers	6	No. 8 (2); No. 10 (1); No. 12 (1); No. 16 (2)
Ladles	2	6 oz. (1); 2 oz. (1)
Tea kettle	1	6 qt.
Asbestos mats	2	
Cooling rack	2	10 by 14 in.
Pastry brush	1	
Garbage cans	3 or 4	5 gal.
Trash containers	2	Pressed wood
Storage cans for staples	As needed	
Potato masher (unless mixer)	1	
Shears	2	
Biscuit, cookie cutters	6	
Knife sharpener	1	
Apple corer	1	
Hand peelers	2	

Service Equipment

Dinner plates	10 doz.	8 in. china, rolled edge
Fruit dishes	10 doz.	4 in. china, rolled edge or glass
Salad or dessert plates	10 doz.	6 1/2 in. china, rolled edge or glass
Custard cups	15 doz.	4 oz. china or glass
Mugs (unless milk in containers)	10 doz.	8 oz.
Glasses (unless fountain)	10 doz.	8 oz., no nick or equal
Knives, dessert	5 doz.	Nickel silver, silver plated or stainless steel
Forks, dessert	10 doz.	Nickel silver, silver plated or stainless steel
Spoons	15 doz.	Nickel silver, silver plated or stainless steel
Soup bowls	10 doz.	8 oz.
Trays	10 doz.	Rubber composition
Cups and saucers	2 doz.	6 oz. cups

Cleanliness Highly Important

The most important factor in maintenance is cleanliness. Ease of cleaning is to be considered in the kitchen itself and in equipment. This applies to floor and walls as well as to equipment.

A quarry tile floor is best from the standpoint of cleaning but it may be too expensive for the small kitchen. A hard surfaced cement, which may have a color in the special finish layer, is fairly satisfactory. For the small kitchen, a heavy inlaid linoleum should prove resilient and durable if properly cared for. Grease and water should not be allowed to stand on it.

Walls and ceiling should be painted with a good washable enamel paint. A lightweight linoleum can be glued to the plaster as a wainscoting if it can be obtained. Many new materials, impervious and inexpensive, will be available for wall finishes after the war.

Equipment should be of materials and finish that are readily scrubbed. Unless movable, it should be placed at least 12 inches from walls and from 10 to 12 inches from the floor so that it is possible to clean around and under it. Unless the range has legs at least 10 inches high, it should be set on a platform of tile or cement.

To prolong the life of equipment, it must be meticulously cleaned and, if mechanical, oiled regularly. It should be disassembled at regular intervals for thorough washing.

At the first sign of poor function

investigation should be made to prevent damage or breakdown. Repairs should be made promptly. It is likely that provision will be made for the manufacture of repair parts during the emergency period.

Layout will have to vary in each installation according to the items of equipment which can be purchased and the space in which they are to be located. The rule of good placement is to follow the kitchen processes with as little doubling and overlapping as possible.

To apply this rule we would, therefore, strive for the following sequence: (1) storeroom and platform scales near the entrance, probably at the left; (2) vegetable preparation sink at the other side of the entrance, probably at the right; (3) cooking unit, consisting of range or range and oven and cook's table, next to or at right angles to the vegetable preparation unit with a rack for pots and pans; (4) salad and sandwich table at a right angle to or convenient to the vegetable preparation sink; (5)

refrigerator next to or convenient to the salad table and serving table; (6) dishwashing unit near the serving table with shelves or racks for dishes near the dishwashing sink or the clean dish table and convenient to the serving table, and (7) the garbage unit, consisting of a place for filled cans until collected, a hose attachment for cleaning cans and a rack for drying cleaned cans.

The cooking utensils required in the kitchen are determined by the numbers to be served and the type of lunch. Utensils are now limited to certain articles in enamelware and to cast or galvanized iron but none of these utensils is as satisfactory as are those ordinarily manufactured in stainless metal or aluminum. It is essential to purchase utensils to fit the ovens and range top and serving counter. Size is determined by the numbers to be served and the length of the serving period.

A suggested list of small kitchen equipment for a lunchroom serving approximately 150 to 200 full meals is to be found on page 53.

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● Group wash fixtures—Bradley Washfountains—provide clean running water to each of the 8 to 10 students simultaneously,—for a quick wash-up.

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Refrigerator
Shelves
Metal cans

FOOD PREPARATION

Peeler*
Sink
Range with one or two ovens
or
Skeleton range and a one or two deck bake oven
Mixer with chopper attachment*
Slicer*
One or more tables
Cooking utensils

SERVICE

One or more tables; hot table, if lunchroom is large
Serving utensils
Tables and chairs for pupils
Dishes and tableware
Water fountain or cooler

CLEANING

Dishwashing machine and soiled and clean dish tables
or
Sink, pan for boiling, and perforated rack or pan for dipping
Sink for washing pots and pans (vegetable sink may be used)
Rack or closet for storage of pots and pans
Mop pail and wet mop
Floor brush for dining room
Slop sink
Rack for cleaning tools
Shelf for supplies

MISCELLANEOUS

Scales: platform, table
Truck, two or three tray
Towel rack

*Desirable when funds permit purchase.



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How to Make Graphs

PAUL V. WEST

Professor of Education, New York University

A GRAPH, or diagram as it is more properly called, is a representation of numerical values on a scale or scales so that their relative sizes may be visually apprehended. Almost anyone can learn the useful art of constructing diagrams by mastering the basic rules and processes of construction. The correct reading and interpretation of diagrams are equally important.

In surveying the material following, it is well to make constant reference to the diagrams that accompany it. Specific attention will be directed to certain of these diagrams by number in connection with various rules and principles as these are stated.

Diagrams are employed as an aid in interpreting data. Therefore, it follows that simple data that are readily grasped do not call for the use of diagrams.

The diagrams themselves should not be of such complex construction as to prevent the reader from having a clear and direct understanding of the data. It is sometimes advisable to break the data into several parts and diagram each part separately.

The diagrams and all written and printed matter given in connection with them should be large enough and so planned as to be read easily, without undue waste of space.

Certain Formal Requirements

Certain elementary rules of construction are here given and illustrated. Some of these rules are formal requirements that arise from the need for standardization. Others are practical requirements for artistic production; still others refer to matters of accurate interpretation and convenience of presentation.

Plan carefully the complete diagram, including title and accompanying data, before constructing it. Sketch the outlines in lightly with a hard pencil in lines that can be readily erased. Arrange printed or

written matter on the diagram and the diagram itself so that it can be read from the bottom or right.

Place the diagram centrally on the page and provide good even-sized margins. As a rule, avoid making use of the margins of the graph paper, as this will result in crowding of material in the margin and in loss of balance.

Style of Diagram Titles Important

In planning the diagram the title needs special attention. Place it below the diagram and in the form shown in figures 4 and 5. Do not permit the title to extend beyond the sides of the diagram. Avoid the use of abbreviations unless these are well known to the reader. Also avoid such introductory terms as "Polygon Showing," since the type of diagram does not need identification and it is obvious that the purpose of any diagram is to show something.

Capitalize the chief words, as in the samples given. Avoid giving the title in sentence form with a period

at the end; also avoid the use of disconnected phrases. Allow a definite space, not too wide, above the title.

The scale or scales used must receive special attention (fig. 1). Since the scale lines are the basic points of reference, make them solid and heavy, at the same time avoiding too great a degree of coarseness for the size of diagram being used.

Indicate scale divisions clearly. These should preferably be extended on the inside of the scale line, *i.e.* toward the graph proper, rather than outward. Not all division points need be placed as this might result in crowding, but if they are not given those used should be spaced at regular intervals; place division points in the lowest section of the scale so as to indicate the basic units (figs. 4 and 5).

The stubs used for division points may be made longer or shorter depending on whether major or minor divisions are represented (fig. 4). Occasional "guide lines," used at major division points on the scale, which extend through the entire graphed area, are sometimes of great help in reading diagrams (fig. 4).

Include Scale Indexes

Always give scale indexes, in the form of numbers or descriptive terms. Place these outside the scale line, not crowded against it, and directly opposite the scale divisions or the midpoint of the space (fig. 3) to which they refer. Place low values at the bottom of vertical scales and at the left of horizontal scales. (High errors and long life of school buildings may be considered low values.) Make the notation large enough to

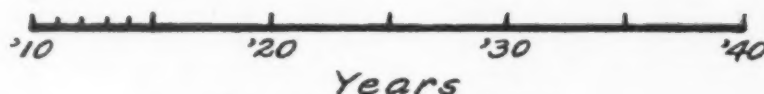


Fig. 1. Construction of a Scale
(Drawn on blank paper and scaled by ruler—1 yr. = 1/8 inch)

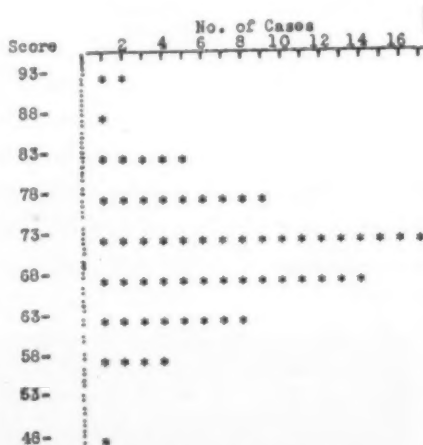
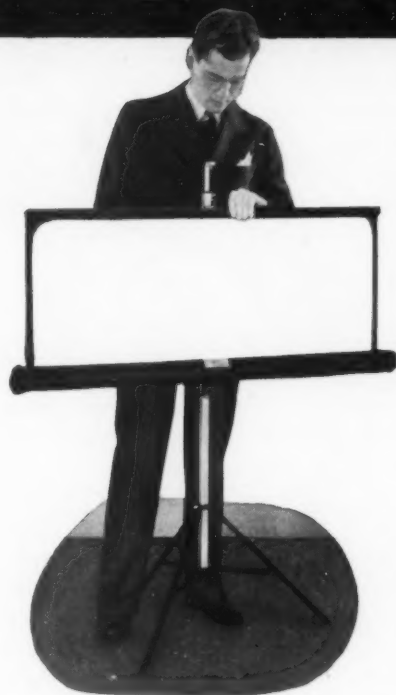
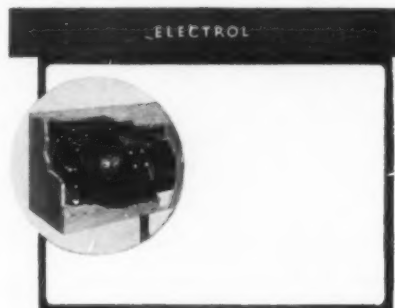


Fig. 2. Example of dot diagram of frequency made on typewriter

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Those who need Da-Lite Screens should apply to W.P.B. for authority to purchase using form 1319, which may be obtained from local W.P.B. offices, Da-Lite visual education dealers, or from us. Orders must be filled in the sequence in which they have been approved. Because the quantity of screens that we are permitted to make is limited, immediate action is necessary. All models and all sizes of Da-Lite Screens will be available in restricted quantities but made to the same high standard of quality for which Da-Lite Screens have always been famous.

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be clearly read. Don't record all of the values if this would result in crowding; you can give only the major divisions.

Give every scale a brief and appropriate title, avoiding symbols or other abbreviations not well known and capitalizing the chief words.

Plan the scale carefully as to length and function. You may use graph paper, in which case you have a variety of forms from which to select the one most appropriate for your task, such as 10 spaces to the inch, 8 spaces to the inch or 5 spaces to the centimeter. Work on blank paper and construct your own scales with the aid of the ruler (fig. 1) or even the typewriter (fig. 2).

In any case, be the master of the scale divisions given on the graph paper or ruler and do not be controlled by them. For example, the unit of measure with which you are working need not be taken as equal to one space on the graph, but to $\frac{1}{2}$ space, $1\frac{1}{2}$ spaces (fig. 6), $2\frac{1}{2}$ spaces or any other convenient number.

Helps to Easy Reading

If you want so to use the diagram that you can read off values readily to the unit, avoid such awkward combinations as 5 spaces equals 7 units, in which the intervening units cannot be directly read.

Control the scale lines carefully as to length, especially when both ver-

tical and horizontal scales are used, so that good proportions may be kept.

As to the diagram proper, or the actual graphing of values, there are only three basic types of representation, each of which offers great variation.

The first is by the use of dots in some form, each dot standing for one or a certain grouped number of measures, as hundreds. These dots may take the shape of squares, blocks, circles, asterisks (fig. 2), names or numbers or even, as in the well-known pictographs, of little buildings, books, people, ships or other subjects. Block diagrams permit the placing of numbers or initials in the blocks as a means of identification (fig. 3).

Use of Bars Effective

The second scheme involves the use of bars of any desired width which extend as far as the value of the measure to be graphed. These may take the form of lines, differentiated by being made heavy or light, solid or broken, dot-dash or of real bars with area in blank, solid, cross-hatched, barred or dotted (figs. 4 and 6). If the short horizontal separating lines for the blocks and the iden-

tifying numbers in figure 3 were removed the diagram would be a bar diagram of frequency.

Bars should not vary in two dimensions when they are intended to represent values along one scale only. For this reason, pictographs in which bars take the form of objects, such as battleships representing the size of navies of the world powers, are unsatisfactory, since they are ambiguous. While intended to represent only one dimension, they really extend in two dimensions and may be conceived of by the reader as three dimensional.

The ordinary pie chart, or 100 per cent circle, is really a bar graph in which the length of the arc along the circumference is the graphed value, but it is not as directly or as easily grasped as the 100 per cent bar graph (fig. 4).

Line Graph Shows Continuity

The third form is the line graph which implies a continuity, as in population changes through a period of years, or a curve representing growth in learning or a polygon showing distribution of a population along a base scale (fig. 5) in which it is assumed that there is a gradual gradation from one level to the next.

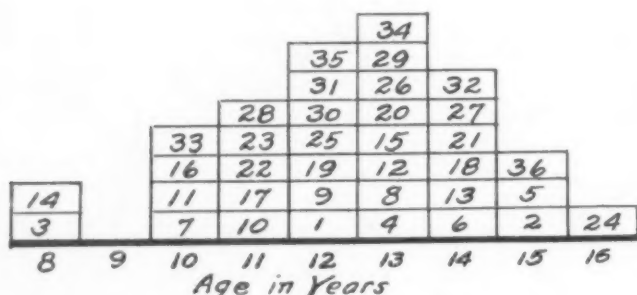
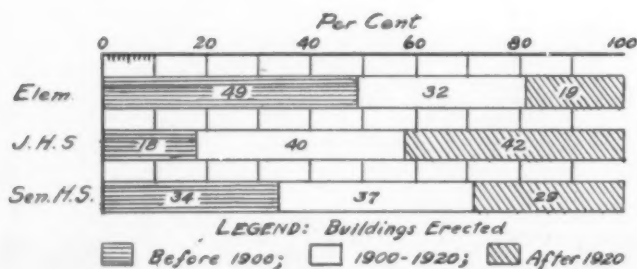


Fig. 3. Block diagram with identification



Diag. 6 - Comparison of Types of Schoolhouses as to Age, Shown by Period of Erection

Fig. 4. Use of 100 per cent bar diagram

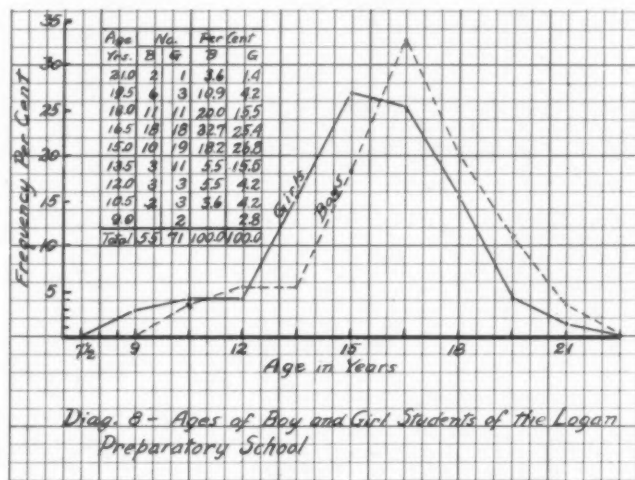


Fig. 5. Illustrating use of line graph (in the form of a frequency polygon)

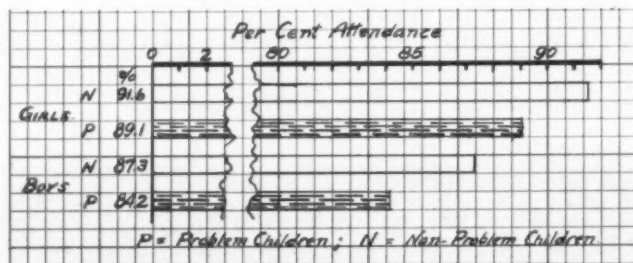
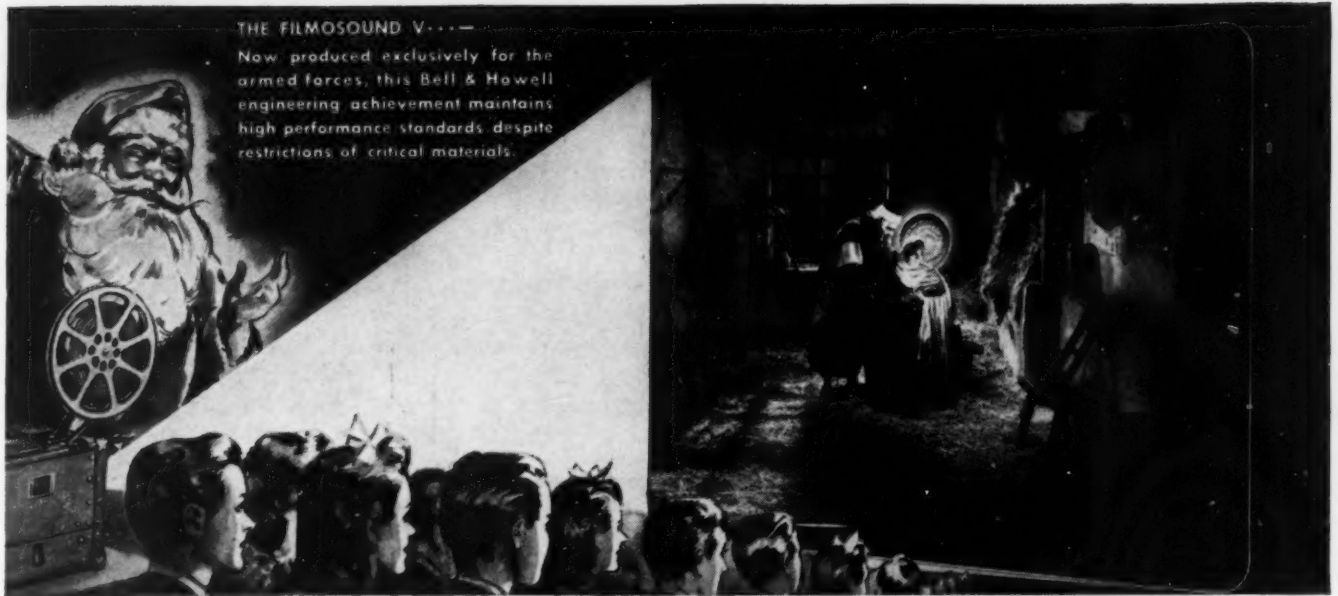


Fig. 6. Illustrating the breaking of a scale

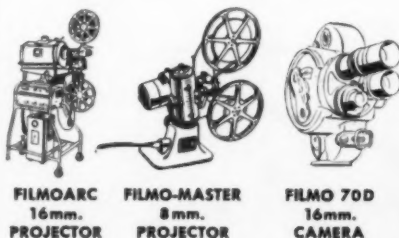


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Filmosound Library has a host of excellent holiday material... *Child of Bethlehem* and *A Saviour is Born* tell the moving story of the First Christmas.

And now—after an even hundred years between the covers of

Dickens' immortal book, Scrooge stars in a great motion picture adapted from *A Christmas Carol*.

Yes, at Christmas and all the year 'round Filmosound Library's thousands of subjects can make holidays mean *more* to your students... can help you make class work even more interesting.

Send for the Filmosound Library Catalog and Film Utilization Digest. They'll help you select the films you need. Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London. *Established 1907.*

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Differentiation of lines is made as indicated above, where lines are treated as bars (fig. 5). The line graph has an advantage over dot and bar diagrams in the fact that several comparisons may be made without confusion by superimposing the lines on the same graph, as in figure 5.

In conclusion, several miscellaneous rules should be kept in mind.

The data on which the diagram is based should accompany the diagram, either as a table in context which may be readily referred to or

as a table incorporated in the diagram (fig. 5) or in the form of specific figures isolated from the table and recorded in or on the diagram (figs. 4 and 6).

When comparisons are to be made that involve a consideration of differences as related to the total range of data from 0, or other point of origin, to the highest value, the total scale should be given rather than merely a small section of it; if this is not feasible, the scale should be broken to indicate the omission of a

part of the scale as is in figure 6.

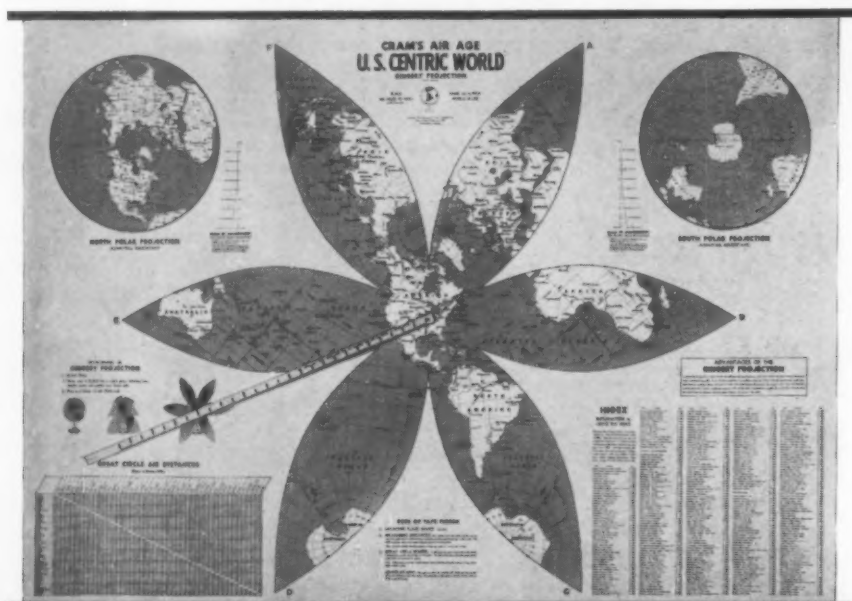
When comparisons of the distributions of unequal sized groups are to be made, they should be reduced to the same base, preferably 100 per cent (fig. 5).

In relatively simple diagrams the differentiation of the graphic representatives may be identified on the graph itself, as in figure 5. In other cases a definite legend needs to be given. This may be placed below the graph proper, as in figure 4, or it may be incorporated in a box placed in the diagram in much the same way that the table is given in figure 5.

Seek simplicity, avoiding ornate embellishment of the diagram and printed matter. Avoid differentiating dots, bars and lines by the use of colors when you desire to reproduce the diagrams in printing or by photography. In general, blue-lined graph paper will not be reproduced by photographic processes, but red, green and black lines will be.

The use of good ruling pens and waterproof India ink will ensure good reproduction.

In laying out a diagram and locating points, use a sharp pencil. Be sure your ruler has a straight metal edge. Seek precision in locating measures on the scale used and in drawing connecting lines. Avoid drawing lines "freehand."



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HOW TO READ A MAP—15 minutes. 16 mm. silent. For grades 5 to 12 in social studies classes. Princeton Film Center.

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His **IDEA** Took Motion Pictures to the **CROSSROADS** and **CLASSROOMS** of the World

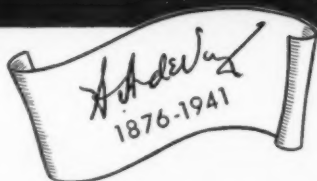


THE modern miracle of Visual Education—given full leash by the speed-up demands of War—had its beginnings in 1912 in a "suitcase projector" that was destined to take motion pictures out of the theater into the meeting places and classrooms of the world.

For three decades Dr. Herman A. DeVry—the man who conceived the **IDEA** of **PROJECTOR PORTABILITY**—made a succession of engineering contributions to the progress of Visual Education that won him a place with Thomas A. Edison and George Eastman on the Honor Roll of the Society of Motion Picture Engineers.

Today's mass production and fighter film-training programs were presaged by his 1914 pioneering of a school library of 86 motion pictures on major subjects of the school curriculum—complete with teacher study guides. In 1925 he established the *DeVry School of Visual Education*, which developed into the National Conference on Visual Education—the largest organized force in the visual field dedicated to the furthering and perfecting of "learn-by-seeing" techniques. Also in 1925 he founded *DeForest's Training, Inc.*, to teach Electronics with the aid of motion pictures.

Dr. DeVry would have been 67 years of age on November 26th. For the company that bears his name, 1943 is the 30th anniversary of its founding. Over its plants flies the coveted Army-Navy "E" with Star—designating continued excellence in the production of motion picture sound equipment—another "first" for **DEVRY**—another tribute to the vision, determination and integrity of its founder—whose inherent modesty would disclaim the oft' heard tribute, "*Father of Visual Education.*"



DEVRY

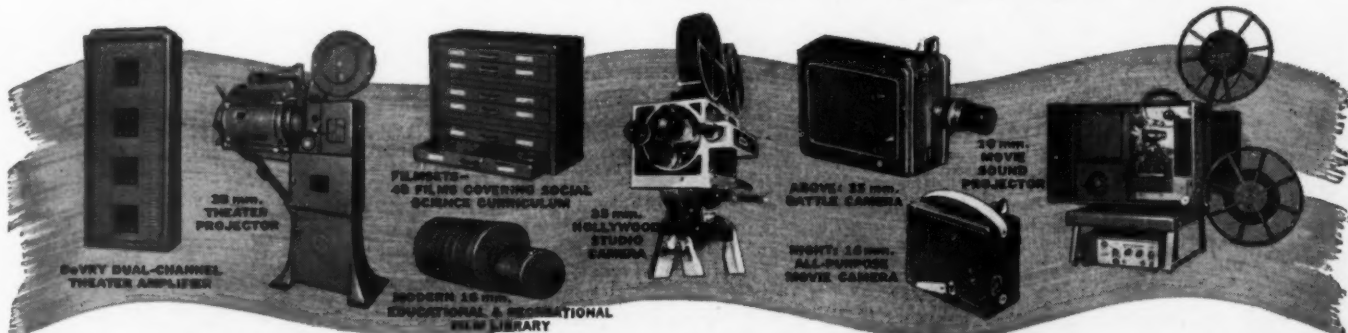
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WORLD'S MOST COMPLETE LINE OF MOTION PICTURE SOUND EQUIPMENT

"Every dime and dollar not vitally needed for absolute necessities should go into WAR BONDS and STAMPS to add to the striking power of our armed forces."

—President Roosevelt

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EVERY PAYDAY

10%

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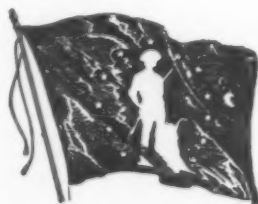
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New Goal for Payroll Savings Plan!

Along with increased war production goals go increased costs : : : extra billions which must be raised, and raised fast, to win this war.

That means we must raise our sights all along the line, with every firm offering every American with a regular income the chance to buy more War Bonds. YOUR help is asked in encouraging employees to put at least 10 percent of their pay into War Bonds every payday, through the Payroll Savings Plan.

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THE NATION'S SCHOOLS

CHALK DUST

On the March

America is on the march! The Army and the Navy prepare their task forces for victories to come! For this preparation, the Armed Services employ the most modern methods in personnel training, in the science of logistics, in strategy and tactics.

Just as the Military must train its task forces to wage unrelenting war for total victory, so must the schools of America have their task forces trained and equipped for the battles of peace. The task forces of the schools are working now in salvaging materials, selling war stamps and bonds, raising and processing food and in assisting in a thousand and one ways on the home and production front. The task forces of the schools are training for the future in studying and thinking and planning and living democracy, in learning the lessons of history, and in practicing tolerance and understanding.

These task forces of the schools must be quickly trained and hardened and sharpened, for tomorrow they go forth to bind up the world's wounds, care for him who shall have borne the struggle and do all the things that may attain and cherish a just and lasting peace upon the face of the earth.

A SECRETARIAL SALUTE

*Hail to the Chief, that executive rare
Who handles his school with a definite
flair;*

He meets every crisis with calm discipline

*And the angriest mamma responds to
his grin.*

*When he gives forth, the Rotary
chuckles in glee*

*Yet his writings are solemn with high
dignity.*

*What is the secret that makes the Chief
tick?*

*What makes his speeches so witty and
slick?*

*How does he get that particular way?
It's all due to Ruth or to Hazel or Gay.*

*Each superintendent who runs a good
school*

*Is sure to give heed to a hard and fast
rule.*

*If you look underneath you will find,
it is true,*

*A Marion, Marguerite, an Ada or Sue.
It may be an office-full, working all day,
Or, in humbler stations, it may be a
May;*

*But, seriously, Mister, (ain't it the
truth?)*

*Aren't the thoughts you thought you
thought thought up by Ruth?*

*And the speech they applauded so
loudly today?*

*Who told you the jokes? Was is Mar-
guerite or Gay?*

*A salute to the Boss's boss, give her
her duel!*

*Suggestion: Her budget may need a
raise, too!*

Christmas Editorial

Virginia, your little friends are wrong. They have been affected by the skepticism of a skeptical age. They think that nothing can be that is not comprehensible to their little minds. All minds, Virginia, whether they be that of the principal of your school or even the president of the board of education, are little.

Yes, Virginia, there is a Santa Claus. He is the school janitor. He works hard to keep you cozy and warm all winter and, in spite of having to use the cheapest coal from the lowest bidder, by 3 o'clock every afternoon he gets up enough steam so that you fairly sizzle. He keeps the schoolrooms clean and shining though he often has to use equipment that was purchased from Civil War surplus. If he sometimes uses uncouth words as he collects his daily quota of gum from the underside of desks, forgive him, Virginia, for he gets blamed for the mistakes of the building committee and the failings of the kindergarten teacher.

Do not be deceived, Virginia, by the long beard, the red cap and the pillows that the janitor wears as he comes around the last day before vacation. He is Santa Claus and no kidding. He has been pressed into service to save the dignity of the principal who is writing on child development.

No Santa Claus? Ah yes, he lives and lives forever. A thousand school principals from now, Virginia, nay ten times ten thousand school principals from now, the janitor will continue to be Santa Claus for he is on civil service. He will continue to make glad the heart of childhood as the little ones innocently pull his whiskers and pinch him in unsuspecting places.

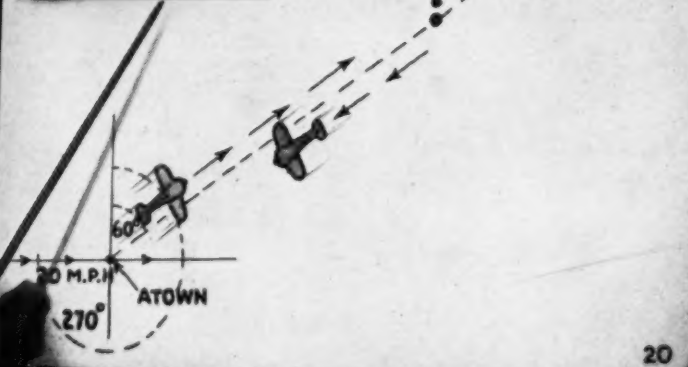
I trust I have answered your question, you little lug, and that you will keep your trap shut hereafter.

THE NATION'S SCHOOLS

"HERE'S THE HELP YOU MAY
HAVE BEEN LOOKING FOR"



Our problem is to fly from Atown toward Beetown and return to Atown on exactly 25 gallons of gasoline. Given wind from the west is 270° at 20 m.p.h. Air speed of plane is 100 m.p.h. The True Course is 60° .



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NEWS IN REVIEW

Bills Favor Postwar Education

Implementing the President's recommendation for postwar education of discharged service personnel at government expense, Chairman Thomas of the Senate education and labor committee on November 3 introduced a comprehensive bill, S. 1509, covering the preliminary proposals.

President Roosevelt on October 29, endorsing a report by the armed forces committee on postwar educational opportunities for service personnel, had recommended to Congress that a year's education be given free to any person with six months' honorable service and that specially selected personnel be given an additional one, two or three years' schooling.

According to the bill, training may be taken at any approved institution in any branch of knowledge in which the person is best qualified and in which the number of trained personnel is likely to be inadequate under conditions of peak employment.

The government will pay the institution the usual tuition and fees so long as students maintain good standing. Selectees will be paid \$50 a month for board, lodging or similar expenses or will be furnished all or part of board and lodging in kind. Persons with dependent husband or wife will receive an additional \$25 a month with \$10 for each dependent child. Those who go on beyond the first year will have the money lent them by the government to be repaid four years after completion of training with 3 per cent interest.

S. 1507, a bill introduced by Senator Clark of Missouri, provides that any person who has served honorably ninety days or more since Dec. 7, 1941, or less than ninety days, if discharged for disability incurred in line of duty, shall be entitled to such education as the Administrator of Veterans' Affairs may prescribe.

Also introduced by Senator Clark was a third bill, S. 1506, which applies to personnel with service as prescribed in his other bill but without regard to age. S. 1507 covers only those under 26.

To Avoid Holiday Travel Rush

The Office of Defense Transportation has asked that preparatory schools and colleges adjust Christmas vacation periods so as to eliminate travel by students during the height of the holiday traffic. School authorities are asked to adopt one of two alternatives, namely, release students not later than December 15 and not require their return before January 11 or begin the vacation period by

December 15 or end it on or after January 11, fixing midweek dates for both release and return of students.

Big Call for Holiday Workers

School officials in many cities are extending Christmas vacations to permit high school pupils to help out in post offices and department stores and, in some instances, to save fuel.

In the District of Columbia an extra four days have been granted pupils as a fuel-saving measure and to relieve the manpower shortage in the post offices. The four days will be taken off the Easter holidays.

The D. C. postmaster has requested 1000 boys and 800 girls to help with the mails the week before Christmas. In accordance with an established custom senior high school pupils with high grades may be excused on December 10 to work in stores and private industries that have a heavy Christmas business.

Baltimore merchants are asking that senior high school pupils be dismissed for the entire month of December.

Coming Meetings

Dec. 3-4—Arizona State Teachers Association, Phoenix.
Dec. 15-17—American Vocational Association, Chicago.
Dec. 27-29—Pennsylvania State Teachers Association, Harrisburg.
Dec. 28-29—New York State Association of Secondary-School Principals, Syracuse, N. Y.
Jan. 10-12—American Association of School Administrators, regional conference, Seattle.
Feb. 15-17; 22-24; 28-March 1—American Association of School Administrators, regional conferences, Atlanta; New York; Chicago.
March 8-10—American Association of School Administrators, regional conference, Kansas City, Mo.
March 9-11—Mississippi State Teachers Association, Jackson.
March 17-18—Montana State Teachers Association, Helena.
April 15—Massachusetts State Teachers Association, Boston.

A.A.S.A. Meeting at Kansas City

A fifth regional conference of the American Association of School Administrators to be held at Kansas City, Mo., has been added to the four previously announced. The schedule now reads as follows: Seattle, January 10 to 12; Atlanta, February 15 to 17; New York, February 22 to 24; Chicago, February 28 to March 1; Kansas City, Mo., March 8 to 10. A sixth will be held some place in California.

WASHINGTON NEWS

By EVA ADAMS CROSS, Special Correspondent

Salary Adjustments Possible

Nonprofit organizations that have been exempted from income and social security payments do not have to file applications for approval of wage and salary adjustments with the National War Labor Board, it was ruled October 16.

Such organizations, nevertheless, are expected to observe and abide by the national wage and salary stabilization policy in making adjustments in the wages or salaries of employees. Reliable advice concerning such matters may be obtained from regional War Labor Boards.

F.W.A. Aids Child Care Centers

To aid mothers who have taken war jobs, Maj. Gen. Philip B. Fleming, Federal Works Administrator, on October 23 liberalized assistance to child care centers and nurseries under the Lanham Act.

The new policy will keep fees under a ceiling of 50 cents a child a day. The prevailing fee has been 50 cents but several cities, fearing losses, have been charging from 75 cents to \$1. These high fees exacted of mothers with small earnings, said General Fleming, have kept out of the centers the children most in

need of them and have kept mothers from working in areas in which the labor shortage is acute.

The minimum fee, for purposes of determining the extent of F.W.A. contributions, will be the equivalent of the cost of food served the children. Each community will set its own fees.

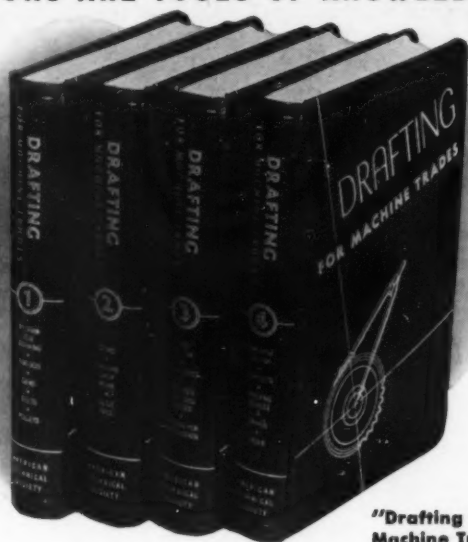
MRO Rating for Paper Cups

Schools may now assign an AA-2 rating under CMP-5A to procure paper cups. No person may accept delivery of any paper cups and paper food containers that will increase his inventory to more than his reasonably anticipated requirements for the ensuing thirty days, except that whenever the minimum standard commercial packing case quantity exceeds a thirty day supply the minimum standard commercial packing case quantity may be purchased without violating this provision.

More Skillets and Kettles

A revision of L-30-c, issued October 22, permits an increase in the amount of cast iron that manufacturers may use in skillets, household kettles, sugar or wash kettles (16 gallon capacity), butchering kettles, Dutch ovens and flatirons. The

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When peace comes, these binding fabrics will be available again. Meanwhile, PX Cloth and "Fabrikoid" will continue to serve books now in use . . . tools that are working for American men of design—for Victory. E. I. du Pont de Nemours & Co. (Inc.), "Fabrikoid" Division, Newburgh, N. Y.

*"Fabrikoid" is Du Pont's registered trade mark designating its pyroxylin coated and impregnated binding material.



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only decrease in quotal allowances is in the case of muffin pans and cornbread or bread stick pans.

More Shoes for Children

Consideration will be given to shoe manufacturers' appeals to increase production of infants', misses' and children's footwear, said W.P.B. October 26. Requests for transferring production quotas for men's shoes to other lines for which a greater need exists was under consideration, the officials indicated. The 25 per cent increase in production made in July relieved the situation somewhat

but it was felt that further production of shoes for growing children should be allowed.

A new supply of nonleather shoes for children up to about 8 years will be available ration-free about the first of next year, O.P.A. announced November 2. Any such shoes larger than misses' and youths' size 3 will be rationed.

O.P.A. is limiting these ration-free shoes to small sizes so as to encourage production in the pre-school and early school age ranges where the shortage is most serious. Although the shoes will

have canvas uppers, they will not be ordinary gym and tennis shoes. The soles will be suitable for general wear.

Good News on Cutlery

Schools will be able to get more satisfactory knives, forks and spoons through revision of cutlery order L-140, effective November 5. The revised order rules that manufacturers and distributors may sell silver-plated or chromium-plated flatware (produced on or after the effective date) and alloy steel flatware to educational institutions, orphanages, cafeterias, lunchrooms, lunch counters, hospitals, hotels and restaurants.

Paper Restrictions Hit Schools

Amendments were made on October 23 to schedules of the Pulp and Paper Order L-120. Among items subject to restrictions are memorandum and notebooks, stenographers' notebooks, loose-leaf fillers, pads, typewriter tablets, writing tablets, blue books, composition books, music work books, spelling books, drawing paper products, examination tablets, spelling tablets and theme tablets.

Office Machinery Ruling

Persons receiving W.P.B. authorization to purchase restricted types of office machinery must buy the products from suppliers named in the authorization and are permitted to procure only the brand of equipment specified, according to an interpretation of Order L-54-c, issued November 8. Form WPB-1688, through which applications to buy office machinery are made, calls for both the name of the manufacturer of the machinery and the name of the supplier. No deviation from these specifications is permitted. Delivery is restricted to applicants named on the form.

"Restricted Pencils"

All kinds of nonmechanical pencils having a sheath of more than .010 inch thick are "restricted pencils" and are included under the controls of Order L-227-b, according to W.P.B. Amendment 1 of the order. The amendment makes it clear that the order is not limited to wood cased nonmechanical pencils. The order prohibits the use of certain critical materials in the production of wood-cased and other nonmechanical pencils and pen holders.

McCloskey Gets New Post

Mark A. McCloskey, on leave from the New York City board of education, has been appointed director of community war services, Paul V. McNutt announced November 6. Mr. McCloskey succeeds Charles P. Taft as director of the F.S.A. office responsible for coordinating war-



PLAN FOR TOMORROW WITH

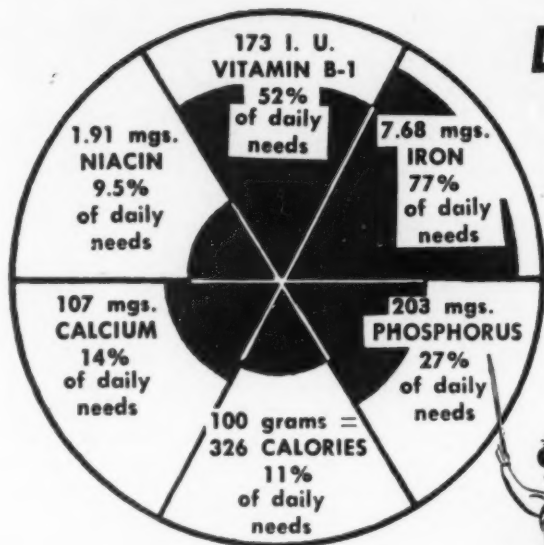
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★ Not only in the battlefields is the fate of humanity being decided. On the home-front, too, earnest men and women everywhere are giving serious thought to the kind of world they want in the post-war—and the libraries, as ever, are supplying facts and information about our own country, about our allies and our enemies to help them reach their conclusions and formulate their opinions.

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time health and welfare services and for the promotion of recreation, social protection and child care programs.

Prior to this appointment, effective November 21, Mr. McCloskey was director of the recreation division of community war services which set up war recreation committees in 1300 communities.

Educational Level of Inductees

Approximately one fourth, or 1,386,180, of the 6,000,000 men inducted into the Army by July 1, 1943, were high-school graduates, according to Selective

Service national headquarters. Less than 200,000 were college graduates and less than 15,000 had taken postgraduate courses in colleges or universities.

Approximately 35 per cent of selectees had not had more than an elementary school education. Many had not attended school at all or, at best, only a few years.

Order L-41 Redrafted

Officials of the schools and colleges section, W.P.B., in interviews given November 12 and 13 questioned the vital importance of any changes in order L-41, redrafted November 1, so far as

schools are concerned. They called attention to certain points:

1. A school need not get permission under this order for construction that does not total more than \$1000 in any one calendar year.

2. Construction jobs classed as minor capital additions in which the total cost of the materials does not exceed \$100 as provided in CMP-5A are permitted.

3. The exception, originally made by L-41-b, for the insulation of buildings has been liberalized in accordance with W.P.B. policy relating to fuel conservation. On the other hand, the exception covering the conversion of heating equipment from oil to coal has been eliminated because of the tight coal situation.

Officials emphasized the fact that on projects costing less than \$10,000 in which no federal funds are involved applications may be made on Form WPB-2570; on projects costing more than \$10,000 or those in which federal funds are involved, applications should be filed on WPB-617; regardless of the amount, applications that involve fire-protection equipment, such as sprinkler systems, must be filed on WPB-617. Applications for fire-protection equipment are processed in Washington.

MISCELLANEOUS

Survey for Bronxville Schools

The board of education of Bronxville, N. Y., has engaged the educational service bureau of the University of Pennsylvania to conduct a survey of its schools. The committee in charge includes E. D. Grizzell, F. M. Garver, William E. Arnold, all faculty members of the school of education.

Illinois Boards Plan Future

With regard to postwar planning, the Illinois Association of School Boards at a recent meeting urged that school boards undertake a survey of schools for determining what developments are needed; that they prepare a building program for the five or ten years following the war; that they engage a school archi-

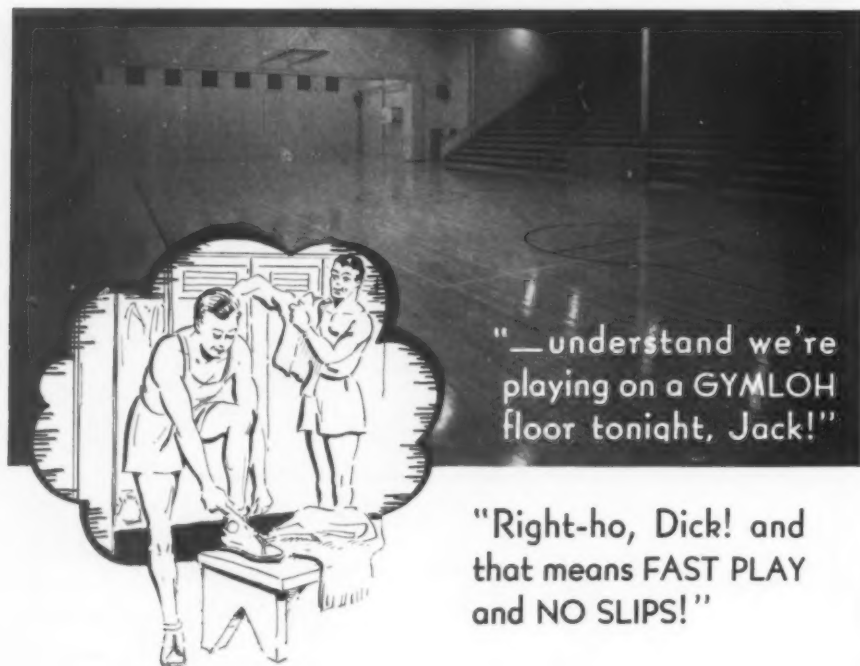
Superintendent's Bookshelf

THE REPUBLIC. By Charles A. Beard. The Viking Press.

APPEASEMENT'S CHILD. By Thomas J. Hamilton. Alfred A. Knopf.

EDUCATION BETWEEN TWO WORLDS. By Alexander Meiklejohn. Harper and Brothers.

THE FIRST FIVE YEARS OF THE MICHIGAN SECONDARY STUDY. By J. Cecil Parker, Wilmer Menge and Theodore D. Rice. Michigan State Board of Education.



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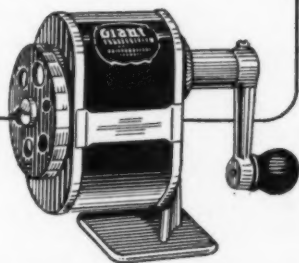
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HOW TO FILE AND SET HAND, RIP AND PANEL SAWS



tect to prepare plans for new buildings, additions or modernization of existing buildings; that they arrange for the financing of at least the first steps in the building program, and that they consider, if necessary, the consolidation of adjacent school districts to meet the needs of the area more adequately.

MEETINGS

Schoolmen's Week in March

The thirty-first annual schoolmen's week at the University of Pennsylvania

will be held on March 22 and 23. This is one of the largest educational gatherings in the country, having an annual attendance of more than 8000, mostly from Pennsylvania and near-by areas. It has, therefore, not been necessary to cancel this meeting because of transportation difficulties.

Construction Council Meets

The subjects of increasing federal control and attempts to dominate public education within the states and postwar planning for schoolhouse construction were features of the twenty-first annual

conference of the National Council on Schoolhouse Construction held in Cincinnati, October 15 to 18.

The program was organized and directed by Thomas J. Higgins of the Chicago public schools, president of the association.

Dean Henry Lester Smith opened the meeting with a discussion of the postwar community school. This was followed by an all day panel on postwar planning in which the following participated: William F. Credle, North Carolina State Department; Ray L. Hamon, U. S. Office of Education; John W. Lewis, assistant superintendent, Baltimore schools; Arthur B. Moehlman, University of Michigan; Elmer T. Peterson, professor of education, University of Iowa.

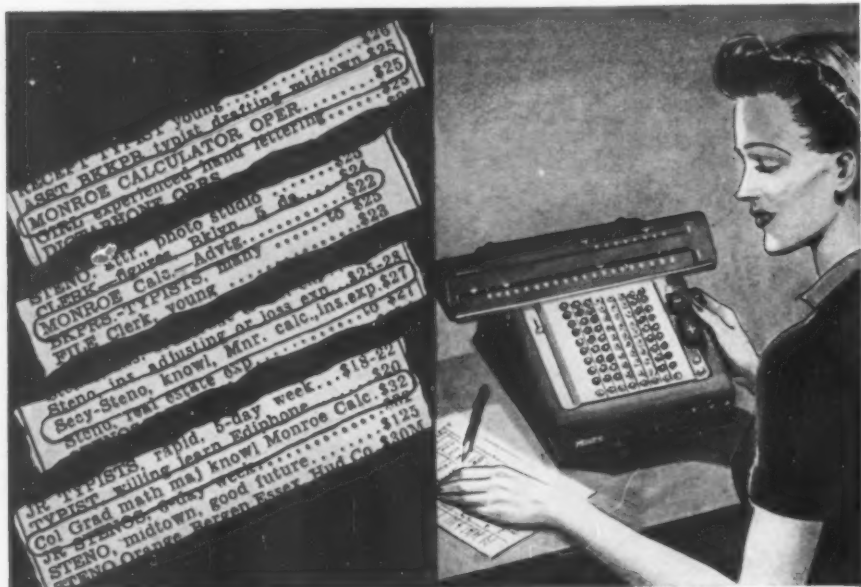
The impact of the Lanham Act upon the control of public education within the states was considered at a Sunday conference and Thomas C. Holy of Ohio State University discussed intimately some of the features of school surveys he has conducted during the past few years. The council strongly advocated that any federal subsidy for schools be controlled by the state or the community, depending upon the organization within the state.

It advocated further that only regularly constituted educational agencies and authorities conduct surveys to determine the need for and location of school plants and that drawings for such facilities be prepared under their direction; that no federal agency be authorized to approve drawings except to assure compliance with minimum construction standards, and that federal funds allocated for the making of such plans be administered by the U. S. Office of Education and the state boards (or state departments) of education.

The council also advocated the following policies relating to construction: (1) that local school administrators be responsible for administering the construction of schools on the basis of needs determined and specifications developed; (2) that responsibility for enforcing minimum construction standards on projects involving the use of federal funds be assigned to competent state or local authorities or to some federal construction agency; (3) that federal funds for grants in aid or loans to states or local school administrators for the construction of schools be made available only for projects planned on the basis of relative urgency of need.

The following officers were elected and installed: president, S. P. Clemons, Columbia, S. C.; vice president, W. K. Wilson, Albany, N. Y.; secretary-treasurer, James L. Graham, Tallahassee, Fla.

The executive committee includes: John E. Nichols, Hartford, Conn., chairman; Gerald E. Irons, Cleveland, and I. O. Friswold, St. Paul, Minn.



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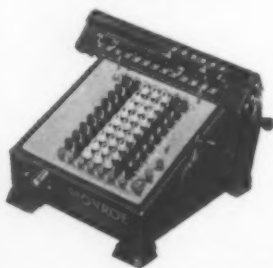
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4. Advice on special problems for advanced classes.

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AMERICAN OPTICAL COMPANY

Teacher Examiners' Meeting

The fifth annual meeting of the National Conference of Teacher Examiners of which Ben D. Wood was general chairman met at Pittsburgh, October 21 and 22. Representatives of the following school systems were present: Chicago, Cleveland, Detroit, Montreal, Newark, New York, Philadelphia, Pittsburgh, Providence, Springfield and Washington.

Decisions of importance in the identification, selection and appointment of teacher and supervisory personnel were made. Because of the growing interest in the affairs of the conference among

educators north of the Great Lakes and south of the Rio Grande, the name was changed to the American Conference of Teacher Examiners.

The next meeting will be held in Philadelphia, October 5 and 6, 1944.

PUBLICATIONS

Two New Manuals Out

Publication of two new manuals, "Our Schools in the Postwar World" and "Physical Fitness Through Health Edu-

cation for the Victory Corps," is announced by the U. S. Office of Education. The first publication is a study guide for adults.

Helpful in Teaching Reading

The bureau of reference, research and statistics of the New York City board of education recently published the sixth in its series of educational research bulletins on reading. It is a 50 page printed booklet entitled "Determining Readiness for Reading," its purpose being to guide teachers and supervisors in the selection and use of formal and informal records, tests and scales to determine reading readiness of first year pupils.

Race Superiority a Myth

"The Races of Mankind," the eighty-fifth in a series of popular factual, 10 cent pamphlets published by the Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York 20, N. Y., summarizes some of the things being done in this country to eliminate race prejudice and encourage interracial cooperation, pointing to the significance of these efforts in war time.

Two leading anthropologists, Prof. Ruth Benedict and Dr. Gene Weltfish of Columbia University, summarize science's answers to currently held beliefs in racial superiority.

Hutchins to Edit Great Books Series

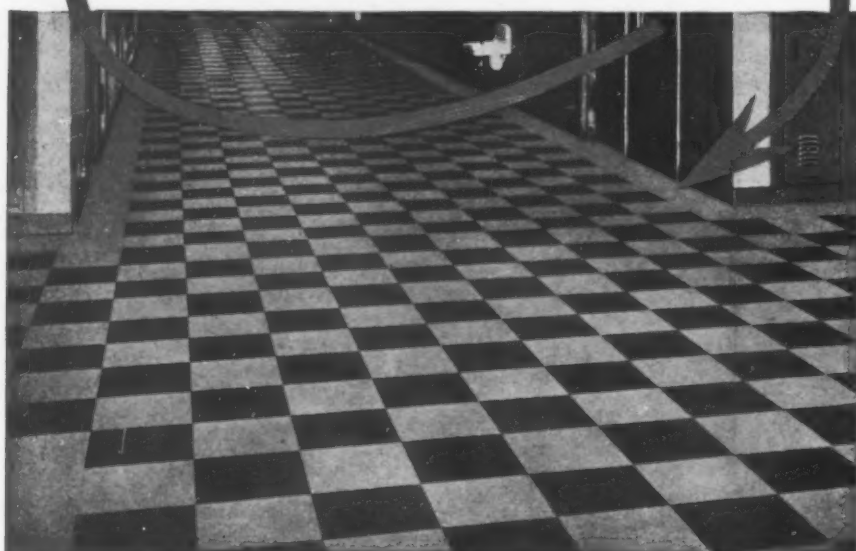
The University of Chicago, through its interest in "Encyclopaedia Britannica," acquired by gift from Sears, Roebuck & Co., is planning to publish the great books of western civilization, the authors ranging from Homer to Freud and including Aristotle, Plato, St. Augustine, Shakespeare, Milton, Tolstoi, Adam Smith and others. President Robert M. Hutchins will be the editor of the series which will make available for the first time in one unit complete texts of these works, together with special explanatory and guidance material to assist the average reader to understand the ideas and development of the civilization of the western world.

To Develop Air-Age Materials

American Airlines, Inc., is providing financial support and sponsorship for a project known as Air-Age Education Research and has obtained the advisory services of a committee of educators to assist in the carrying out of this program.

The purpose of this project is to develop, in consultation with specialists in the field of air transportation, materials that will be useful to teachers and public. The agency is planning to furnish maps and teaching materials that may be obtained without cost by writing to Air-Age Education Research, 100 East Forty-Second Street, New York.

Overcrowded Schools need this **LONG-LASTING FLOOR**



THROUGHOUT the country, schools are generally more crowded than they have been in years. Classes are packed to capacity and in many cases extra sessions double the wear and tear on equipment.

School floors, of course, are getting more traffic than ever before. J-M Asphalt Tile Flooring has proved its ability to stand up under the heaviest traffic for years, and its comparatively low cost is well in line

with the average school budget.

This tough, resilient flooring has a smooth hard surface that is very easy to clean. It requires practically no maintenance. It is available in an almost unlimited variety of attractive colors and patterns, suitable for school floors of every type. Many of these are shown in a full-color brochure we will be glad to send you. Write Johns-Manville, 22 East 40th Street, New York 16, N. Y.

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Readers of *The Nation's Schools* are America's First Family of school administrators, for *The Nation's Schools* attracts more paid subscribers among professional school administrators and their administrative assistants than any comparable magazine. We believe that in editorial integrity and alertness, in news coverage, in format and general excellence *The Nation's Schools* is itself FIRST—that its family of readers is FIRST in discernment as well as in numbers.

NAMES IN NEWS

Superintendents

Dr. Willis A. Sutton will retire from the superintendency of schools at Atlanta, Ga., on January 1. His successor has not been named. Doctor Sutton will become secretary of the Georgia Education Association upon his retirement.

Robert L. Haycock, former acting superintendent of the public schools of the District of Columbia, became the super-

intendent on October 21 following Dr. Frank W. Ballou's retirement because of ill health. Mr. Haycock has been in the District system for forty-eight years.

J. W. Taylor, superintendent of schools at Carthage, Miss., is the new president of the Mississippi Association of School Administrators.

Axel Peterson has succeeded Fred J. Plachy as superintendent of schools at Tyndall, S. D. Mr. Peterson was given a medical discharge from the Army following a course at officers' candidate school at Fort Benning, Ga.

Herbert A. Miller is the new superintendent of schools at Marne, Mich. He was formerly principal of the high school at Saugatuck, Mich.

George F. Jammer is the new superintendent of schools at Lockport, N. Y., after having served as head of the school system at Wellsville in the same state since 1926.

Alfred Anderson, recently of Clearmont, Wyo., has assumed the superintendency at Big Horn in the same state. Mrs. Emma McClintock, a teacher at Granger, is now superintendent at Clearmont.

Harold T. Rand is the new superintendent of schools at Rochester, N. H. John M. Cotton is taking over as headmaster.

Arthur L. Perry has begun a new five year term as superintendent of schools at Rahway, N. J.

Principals

Charles E. Lang, principal of the Lane Technical High School, Chicago, was promoted to the superintendency of elementary school district No. 5 in that city.

Norman Wilson is serving as principal of Storey County High School, Virginia City, Nev. He was a former teacher in Reno.

William H. McMurry, principal of the high school at Fairfield, Ala., has reported to Hollywood, Fla., for indoctrination training after being commissioned a lieutenant (jg) in the naval reserve.

Elmer Field has been named principal of the High School for Girls, Philadelphia, to succeed the late Ruth Wanger, and Matthias H. Richards is the new head of the South Philadelphia High School for Boys.

Thomas A. Parker succeeds the late G. A. Edwards as principal of the James A. Whitted Elementary School, Durham, N. C.

J. Taylor Finley will for the duration fill the principal's post at Robert K. Toaz Junior High School, Huntington Station, N. Y. Amos Pence, former principal is a naval lieutenant. Mr. Finley has been superintendent of the Woodbury Avenue School in the same city.

Miscellaneous

L. W. Brooks has returned to the post of director of secondary education for the school system of Wichita, Kan., a position suspended in 1933 because of the depression.

W. W. Durham, school property superintendent of Tacoma public schools, Tacoma, Wash., resigned, effective November 15. His administrative policies were under question by the board of education, which is controlled by the

AMAZING FACT No. 3 ABOUT M-D DUSTLESS BRUSH...



Above: Metal back makes for compactness. Tufts support one another; also prevents splitting, chipping of block, most common causes of brush failure.

Below: Tufts are not just stapled. Long materials are hand drawn, short materials set by hand with waterproof, oilproof cement.

From the standpoint of long life alone, the "Dustless" brush is an exceptional value. Tuft materials are highest grade. No substitutes are used. Tufts are hand drawn or set by hand. They cannot come out or come loose. Metal back prevents splitting of block. Unique adjuster reverses handle with a simple twist, to give brush equal wear on both sides.

But the "Dustless" brush also has other advantages—in economy and performance. It eliminates sweeping compound entirely. It far surpasses ordinary brushes in dust control. It has a metal reservoir which is easily filled with kerosene, or "Arbitrin", a specially prepared sweeping fluid. As the brush sweeps the fluid filters through the center row of tufts, making the best kind of sweeping compound out of dust on the floor. Independent tests by Health Authorities have proved that this method is so efficient that it removes 97 per cent more germ-laden dust from the air than ordinary sweeping methods. For complete information and prices of "Dustless" brushes write direct to factory: Milwaukee Dustless Brush Co., 528 N. 22nd St. Milwaukee 3, Wis.

Milwaukee Dustless
BRUSH COMPANY

labor unions, a former school janitor being one of the board members.

R. C. Edmundson, former high school principal at Havana, Ill., has been named assistant to the state superintendent of public instruction for Illinois.

Prudence Cutright, acting superintendent of schools, Minneapolis; **Paul T. Rankin**, assistant superintendent of schools, Detroit, and **Maycie Southall** of the George Peabody College of Teachers were elected to fill three vacancies in the membership of the Educational Policies Commission of the National Education Association at a joint meeting of the executives of this organization and of the American Association of School Administrators October 18. They succeeded **Frederick M. Hunter**, **John K. Norton** and **Emily Tarbell** who will retire December 31.

John M. Fewkes, head of the health and physical education department of Tilden Technical High School, Chicago, since 1925, and former president of the American Federation of Teachers, has been granted leave of absence to serve as chief of the industrial health and safety service, War Production Board.

Deaths

James Lewis Mann, former superintendent of schools in Greenville, Ga., died recently after two years of illness.

Howard M. Watson, principal of Stoneham High School, Stoneham, Mass., for seventeen years, died recently. He had left a parent-teacher association meeting early in the evening because he felt ill and died the same night.

Harry E. Fowler, superintendent of schools at Shelton, Conn., accidentally shot and killed himself on a hunting trip. He had held the Shelton post for thirty-six years.

Edward J. Kehoe, principal of P. S. 228, a junior high school in Brooklyn, N. Y., died recently. He was a co-author of "The Treasure Chest of Literature," a reader series for grades 3 to 8, and a former president of the Brooklyn Teachers' Association.

George M. Davison, former high school principal at Gloversville, N. Y., died recently. Mr. Davison spent the greater part of his professional career in New York City schools.

Walter C. King, former district superintendent of schools in Delaware County, New York, died recently. Mr. King entered teaching in 1893 and began supervisory work in 1900. He was first elected superintendent in 1900 and retired in 1941.

Robert Russell Graham, school architect, died at the age of 52 at his home in Middletown, N. Y. Mr. Graham was supervising architect for 40 schools in New York State.

Schools may now obtain **RADIANT METAL SCREENS**



Radiant Screens offer the new Instant Tripod Release, the Auto Lock that does away with screws and plungers and the Hy-Flect Glass Beaded Surface Fabric—in portable, wall and ceiling models.

Under the new WPB order No. L-267, educational institutions are listed among those who may now obtain Radiant Metal Projection Screens and Metal Tripods. This may be done by simply filing application for release on form WPB 1319 with the War Production Board Consumer Durable Goods Branch, Washington 25, D. C. Reference L-267. This new procedure eliminates any other forms. Production under this new order is very limited so prompt action is urged. Form 1319 can be obtained from your Radiant Screen Dealer or direct from us.

Non-Metal Screens Also Available

A complete line of sturdy, non-metal durable models in sizes from 18" x 24" to 14' x 14' and larger is now available without application for educational institutions.

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giving full details, specifications and prices on Radiant Screens of all types. Also contains complete information on repairing old screens.

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For January:

Universal Military Training will probably be made compulsory following the war.

Under these conditions do you favor (1) one year of universal training; (2) two years of universal training; (3) four summers (3 months each)?

Where should this training be placed: (1) following the 12th school year; (2) following the 14th school year; (3) during senior high vacation periods?

Do you favor a high school R.O.T.C. (Junior R.O.T.C.): (1) yes, on a permissive basis; (2) yes, on a mandatory basis, (3) No.

These questions will be answered in the January issue of **The NATION'S SCHOOLS**.

Each month, a nation-wide cross section poll of school administrators is taken on some controversial subject of current importance. The results are reported in the "School Opinion Poll" section of each issue.

This has become one of the most popular features of the magazine.

Watch for the January issue of

The NATION'S SCHOOLS

Quality Counts



Even in so seemingly small an item as inkwells—quality counts. Sloppy, leaky inkwells annoy pupils, waste ink.

Insist on the SQUIRES inkwell—it costs no more, is clean, airtight, gives pupils the feel of good tools and encourages neatness and good work.

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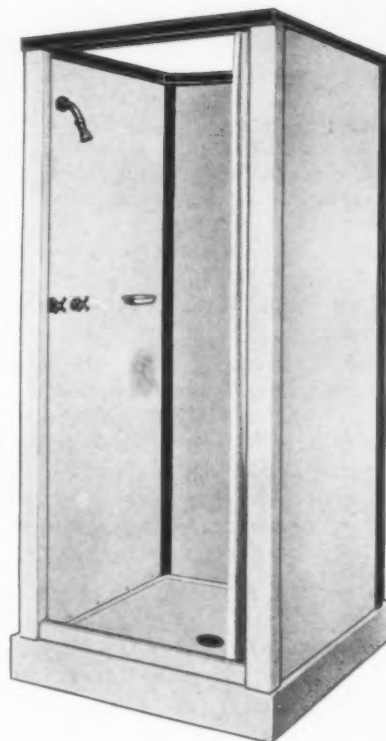
3587A MAIN STREET • HARTFORD 2, CONN.

WHAT'S NEW

War-Time Cabinet Shower

Made of Noncritical Materials

War has brought to the plumbing industry two conflicting necessities: (1) the need for many additional facilities for bathing and (2) the need to conserve critical materials. The new WEISWAY V de luxe cabinet shown is a practical answer for it contains a minimum of critical metal.



Walls of the cabinet are $\frac{1}{8}$ inch smooth, hard-pressed fiber board which, under a nine year submersion test, still retained 80 per cent of its original strength. The walls

are finished inside and out with two coats of high temperature baked enamel. The plastex receptor is processed under 3,000,000 pounds' pressure.

Standard equipment includes a zinc-coated iron two valve combination concealed type of unit with shower head, a cast drain with a wrought strainer assembled integrally with the floor of the receptor, a soap dish, curtain rod and white duck curtain with plastic hangers. A zinc-coated iron unit with head and gooseneck riser pipe may be substituted for the concealed type of shower.

The WEISWAY V cabinet is 32 inches square, 75 inches high. If space is limited a unit 30 inches square is available.

—Henry Weis Manufacturing Company, Inc., Elkhart, Ind.

• When inquiring, refer to NS849

For Patching Concrete Floors

New Material Does Permanent Job

A new development of the Walter Maguire Company, Inc., is EMERI-CRETE, a ready-mixed material intended primarily for use in filling cracks, small depressions, ruts and other imperfections and inequalities in concrete or cement floors.

EMERI-CRETE is composed of the same pure emery that is in Cortland Emery Aggregate, employed for resurfacing old floors, except that smaller particles of emery are used; these particles are mixed with a special quick-setting binder which permits use of the floor six or seven hours after the repair has been made. It is packed in small economical packages, permitting the use of just the right amount to do

W for SCHOOLS

the job. The patches are said not to shrink and have great adhesive properties.—Walter Maguire Company, 330 West Forty-Second Street, New York City.

• When inquiring, refer to **NS850**

Pool Water Clarifier and Softener

Saves Much Time and Labor

The slimy appearance of walls and floors of swimming pools, caused by Algae, can be quickly removed and future growth of Algae stopped by using Aquatone, a product that clarifies the water without hardening it, according to the manufacturer. In fact, Aquatone has a softening action on the water and imparts alkalinity.

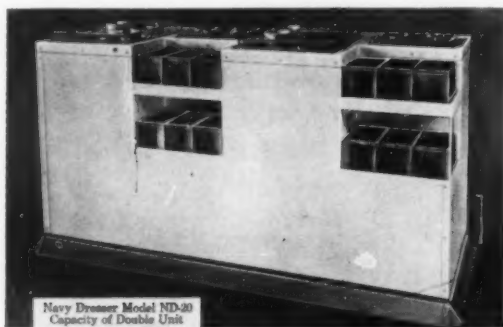
No more scraping of the pool or discoloring the water by use of copper sulphate is necessary, the Creative Chemical Company asserts, which claims a 50 per cent saving of labor required for vacuuming the pool and a further saving of 50 per cent of the water required for replenishing the water vacuumed from the pool.—Creative Chemical Company, 4618-22 Friendship Avenue, Bloomfield P. O., Pittsburgh.

• When inquiring, refer to **NS851**

"Navy Dresser" Quickens Service

In Large School Cafeterias

Developed for use in the Navy, because of its compactness and all-round utility, the new Navy Dresser has distinct advantages in certain large cafeterias where space is



Navy Dresser Model ND-20
Capacity of Double Unit

at a premium. Trays, cutlery boxes and bowls are automatically dispensed at constant counter height by use of the Lowerator principle. When the top rack is empty, its removal automatically brings up the next rackful.

Made also in single units of one half of the capacity and size of the double unit pictured, the Navy Dresser can also handle cups and glasses on special application.—Lowerator Manufacturing Co., Pearl and York Streets, Brooklyn, N. Y.

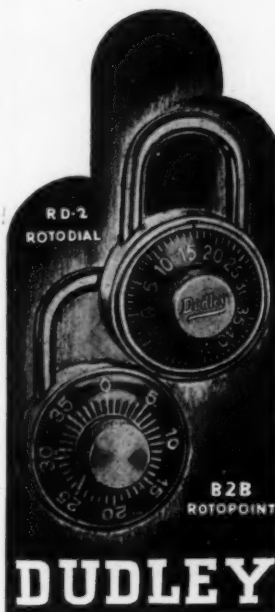
• When inquiring, refer to **NS852**

Stop-It!

Waterproofs Below-Ground Surfaces

To plug openings in masonry walls and floors, Stop-It is quick setting, permanent and waterproof, says the manufacturer. The product is intended for repairing below-ground surfaces that seep water. As a patch material it can be used to repair cracks in walls and floors, fill in where

—makes good lockers better . . . DUDLEY!



Dudley locks are in use today in all types of schools all over America. That's because Dudleys add that vital quality to even the finest lockers . . . safety. For almost a quarter century the favorite everywhere.

Dudley locks are being produced regularly and can be supplied on proper priorities. Let us know your needs. The Dudley line, besides those shown here, includes masterkeyed combination padlocks and built-in locks.

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but Uncle Sam says "No, we need all hard vulcanized fibre for war". So, till there's a release we must ask you to bear with us. That's no fun, however, for you or us either, we know.

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No extra man needed to steady — Roomy platform for men and tools. Great strength, lightweight. Guard rails on platform — Automatic locking — Folds compactly. Easy to carry.

Airplane spruce used throughout — Steel braces — Safety shoes. In sizes 3' to 16' in height — Elevating platform adds height to Dayton. Write today for free catalog, prices.

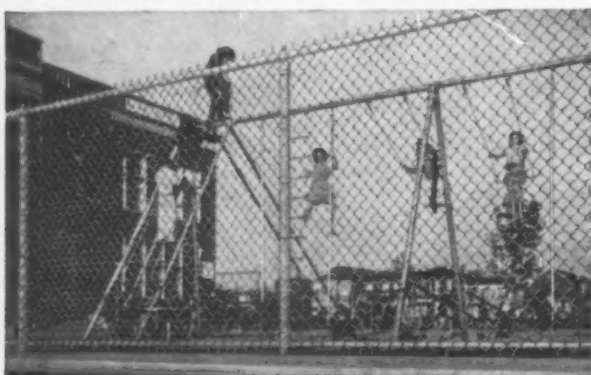
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WHAT'S NEW for SCHOOLS

floor meets wall, build up broken and crumbled areas in concrete walls and tiers, and fill in around pipes and bolts. —Tamms Silica Company, 228 North La Salle Street, Chicago.

• When inquiring, refer to NS853

Improved Backing on "Rubberlike"

Makes Floor Cover Lie Flat

To keep mud and snow from being tracked over corridor and classroom floors, a floor matting, BIRD Rubberlike, has been developed. It is said to be resilient, good looking, long wearing and low in cost. The matting looks like rubber, with a heavy corrugated surface. Made of nonpriority mate-



rials, it comes in three widths, 27, 36 and 54 inches. Stair treads to match are also available.

A recent improvement on this product, which has assumed new value now that rubber matting is no longer available, is its gray backing, which enables it to be cemented to the floor or to be applied without cement yet with no tendency to curl. —Bird & Son, Inc., East Walpole, Mass.

• When inquiring, refer to NS854

Wall Charts for Teachers, Pupils

Showing Construction of Resistors, Rheostats

Available without charge to schools are two wall charts showing enlarged reproductions of cut-away views of the Ohmite rheostat and of the Ohmite resistor. Each chart is 25 by 21 inches. These handy charts make good reference features for shop classrooms and physics laboratories. —Ohmite Manufacturing Company, 4835 Flournoy Street, Chicago 44.

• When inquiring, refer to NS855

Air Age Map Called Revolutionary

Designed by High School Principal

A high school principal, W. G. Gingery of George Washington High School, Indianapolis, has designed the new Cram Air Age World Map, now in production. It is called by the manufacturer one of the most revolutionary ideas in map-making since Mercator's projection of 1569.

In the U. S. Centric World Map, one is able to see the world in terms of equality of area, distance and scale, making it possible for a navigator flying a ship to plot his course by using a straight edge on this map just as a navigator sailing a ship on the water plotted his course by using a straight edge on Mercator's projection. In this map the United States, not the North Pole, is in the center.

WHAT'S NEW for SCHOOLS

The map, to be 68 by 48 inches, will enable anyone to locate place names keyed to the map index and to determine immediately the Great Circle direction from any place in the United States to any place in the world. It will soon be ready for national distribution.—George F. Cram Company, Inc., 730 East Washington Street, Indianapolis.

- When inquiring, refer to **NS856**

NEW CATALOGS

Brochure Presents Machine Tools

Illustrated With Price Lists

For industrial departments, the new Delta catalog is illustrated and presents complete details about the production machine tools manufactured by the Delta Manufacturing Company, Milwaukee. The booklet contains 51 pages and comes complete with order blank and price list.

- When inquiring, refer to **NS857**

Film Catalog Issued

In Sixth Edition

Entertainment films for evening or noon hour recreation, travel films and a series on the English cathedrals are listed by Post Pictures Corp., 723 Seventh Avenue, New York City, in its sixth edition catalog of 16 mm. sound films. Many of the subjects listed are available for the first time on 16 mm. film.

- When inquiring, refer to **NS874**

Ten Lessons on Meat

For Use in Nutrition and Cooking Classes

The popular "Ten Lessons on Meat for Use in Schools" has gone into its sixth edition. This small textbook (135 pages) has been revised and brought entirely up to date through the incorporation of the results of recent research. Two chapters—The Nutritive Value of Meat and Feeding the Family for Health—have been completely rewritten to include the latest information. The book, which is paper covered, sells for 10 cents a copy, the cost of production.—Department of Home Economics, National Live Stock and Meat Board, 407 South Dearborn Street, Chicago.

- When inquiring, refer to **NS858**

Getting Results With Training Films

How the Army Does It

An officer of the U. S. Signal Corps originated a booklet, illustrated with humorous cartoons, on the effective use of training films. Permission has been given Radiant Manufacturing Corporation, 1140-46 West Superior Street, Chicago, to reproduce the booklet, for it is too good a piece of work to gather dust, in Radiant's opinion. A free copy of "The Army Uses Training Films" is yours for the asking.

Another mailing piece from the same concern is the new illustrated screen catalog, containing a new line of nonmetal

THE
Finnell
STEEL
WOOL
Pad



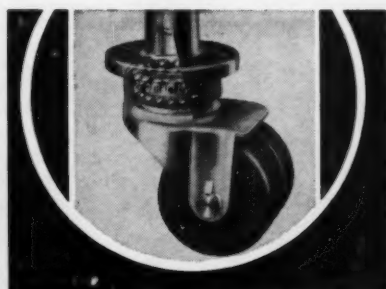
One welded steel-wool pad will outwear three or four of ordinary design! Welded construction permits the pad to wear evenly... gets all the wear out of all the material. And of course, with uniform contact assured, a far better, faster job is possible. The welded pad is the perfect pad for dry cleaning and burnishing waxed floors to a safer, wear-resisting finish... in one labor-saving operation! 7 sizes, 4 grades. Sold in limited quantities.

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Flooring Contractors: Now is the time to get lined up on our "2-Way Profit" proposition. Write for details.

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A "Must" for Floor Maintenance
BRAID-O-PAD has steel wool strands running in all directions, and these strands are continually presenting fresh cutting surfaces. During the entire life of this pad, there is no loss of efficiency. This is because the pad retains its original shape and the braided strands of steel wool remain in the same relation to each other at all times during its use.



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WHAT'S NEW for SCHOOLS

screens available for immediate delivery without priority. A special section of the catalog contains two new plans for renovating and repairing old screens. A third feature of the catalog is the illustrated listing of metal screens, a limited quantity of which W.P.B. has released for essential activities, such as maintenance, repair and operating supplies, on orders up to \$100. These are available to schools.

• When inquiring, refer to **NS859**

School Aids From Business Houses

Are Listed in New Catalog

Pamphlets, bulletins, wall charts, films, slides, cards, samples and demonstration devices—all the educational materials put out by manufacturers, distributors and trade associations in the consumer goods field—have been gathered into a catalog being issued by the Committee on Consumer Relations in Advertising, Inc., 420 Lexington Avenue, New York City.

To simplify the task of teachers, consumers and others in selecting educational materials for schools, colleges and adult educational programs, this catalog has been devised. Items are listed under such captions as Health, Nutrition, Personal Management, Cooking and Household Management, History, Geography and Science. There is a separate listing of films.

To keep this catalog up to date, the committee plans to issue mimeographed supplements from time to time.

• When inquiring, refer to **NS860**

Portable Fire Equipment Described

Booklet in Two Colors, Illustrated

A new line of portable, built-in carbon dioxide fire extinguishing equipment and smoke detecting systems is described in a booklet recently issued by the C-O-Two Fire Equipment Company, U. S. Highway No. 1, Newark, N. J. Printed in two colors and illustrated, the booklet describes the application and operation of various kinds of C-O-Two equipment, such as hand extinguishers with the new "Squeez-Grip" valve, hose rack, hose reel and wheeled units, manual and automatic built-in extinguishing systems. Also included is a description of recharging equipment.

• When inquiring, refer to **NS861**

Supplement to Film Catalog

Contains Latest Releases

Called the United Nations' Victory Number, Ideal Pictures Corporation, 28-34 East Eighth Street, Chicago, has issued a catalog supplement for the 1944 season, a 74 page addition to its great General Catalog, 23d edition. It is available free on request.

• When inquiring, refer to **NS862**

Electronics at Work

In Industry, War, Medicine and Home

Typical applications of electronics are demonstrated in a handsome 44 page booklet, B-3264, just issued by Dept. 7-N-20, Westinghouse Electric and Manufacturing Com-

Address manufacturers for further information

WHAT'S NEW for SCHOOLS

pany, East Pittsburgh, Pa. Subtitled "A Practical Introduction to a Practical Science," the booklet gives a broad conception of electronic science through a glimpse of its hundreds of uses today to the average man, to the military man, to the medical man and to men in industry.

- When inquiring, refer to **NS863**

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